

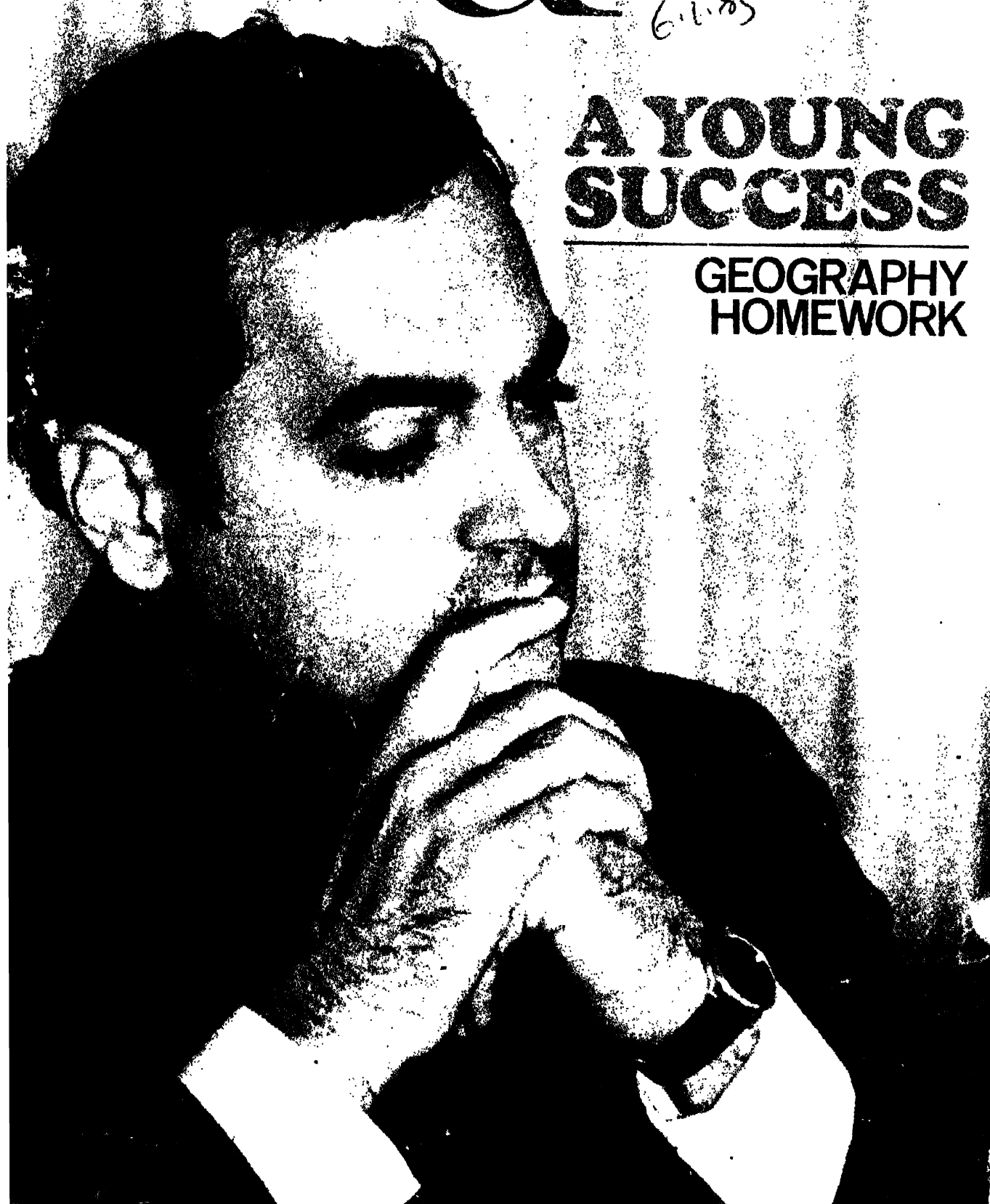
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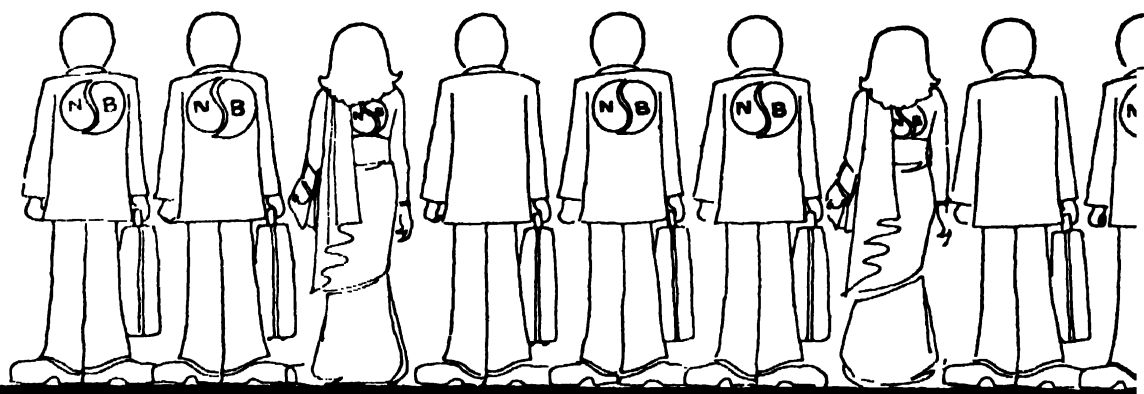
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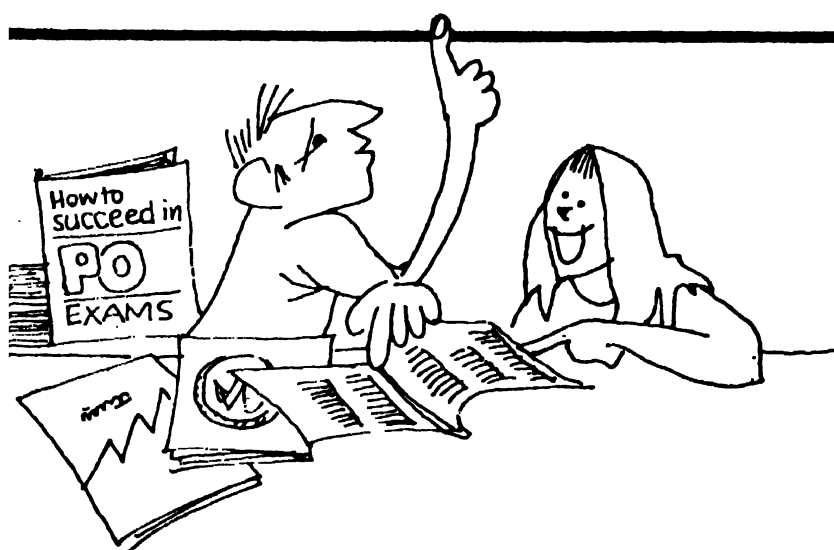
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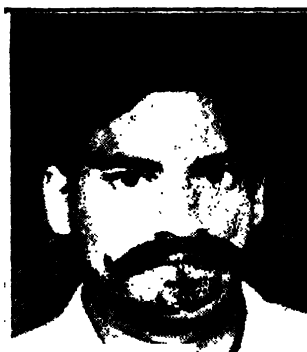
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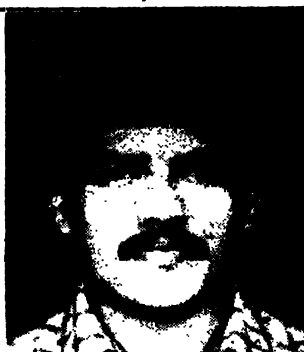
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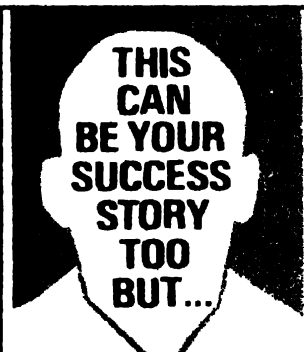
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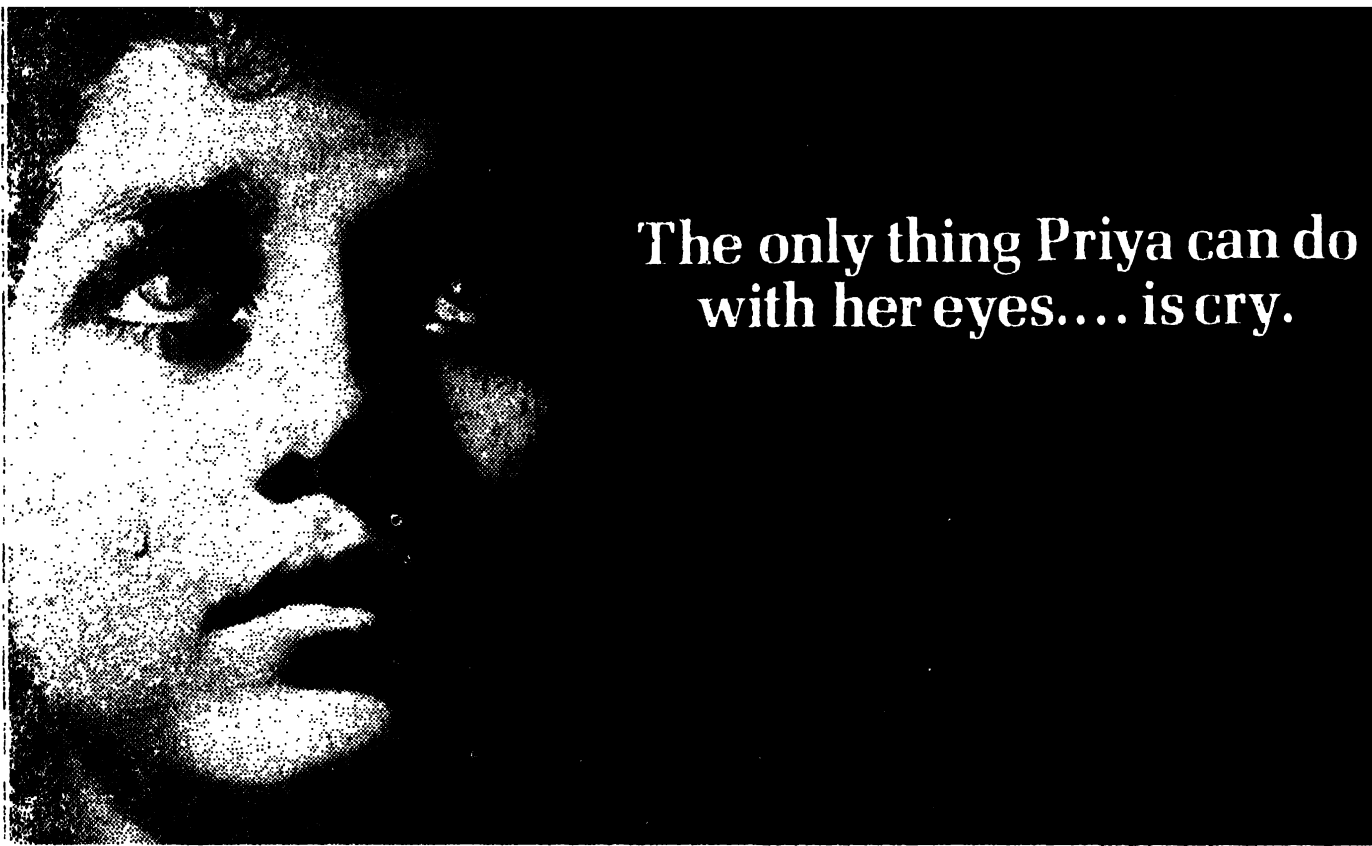
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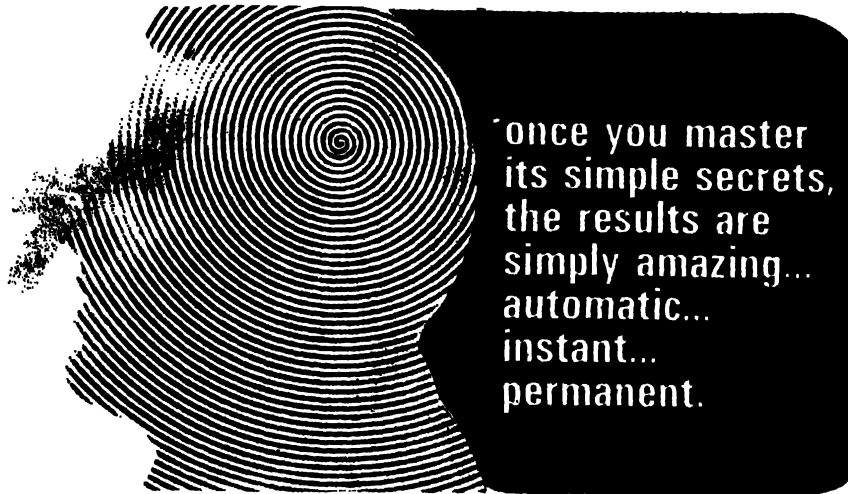
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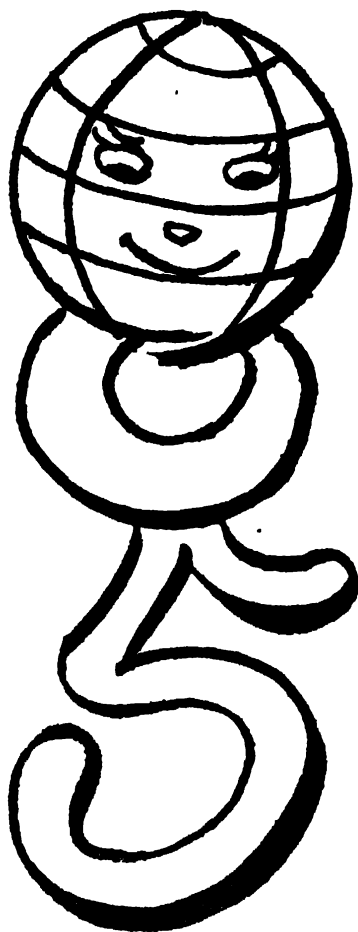
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JANUARY 1985 VOLUME 5 NO. 1

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LETTERS

I'm An Indian

I came, I saw, I looted
I violated them, I butchered them, I roasted them alive,
my brethren
I set property afire and enjoyed the overture as well as
the aftermath of the conflagration.
I regale my friends now with my deeds of heroism
I am proud to be an Indian

Sanjay Bhatnagar, Jabalpur

Best Letter : Rs 40

How Civil

Democracy at one time used to be upholding of 'civil rights'. But today it is probably only 'civil riots'!

Lakshmi Kamalakar, New Delhi

Prize-winning Letter : Rs 25

Demons Gone Crazy

Most of us are victims of 'indifference' and when we do react, our anger is so negatively directed, especially of our youth, that democracy becomes a case of 'demons gone crazy'. Unless we collectively learn to react positively and intelligently, violence akin to that which took place after Mrs Gandhi's assassination will continue to occur, and we as a nation will continue to insult the very person we intend to idolise.

Ali Akbar Tehrali, Madras

The first reaction to Mrs Gandhi's assassination was one of disbelief. Next came a sense of shame. With the last three-and-a-half decades of stable democracy one had come to believe that this country was different from most of the Third World countries. But this seems true no longer. Two mad men have made us sit among those smaller countries where shooting down of leaders is part of politics.

Bhupesh, New Delhi

Let us shed hatred. Communal harmony is the need of the hour. It is the only tribute to our departed leader.

S. Sundara Rajan, New Delhi

Campus Chaos

Campuses have become educating grounds in political demagoguery (*Hello Folks*, Nov '84). The patronage of political parties lends students the stamp of being youth leaders and provides a good deal of backing which is used to frustrate the forces of law and order. Whenever the police takes action against them a big hue and cry is raised about students being victimised. Consequently, they take it for granted that ultimately nothing would be done. The Nagpur incident is a glaring example of what they actually are. What is needed is drastic police action and weeding of the educational institutions.

Vivek Dubey, Allahabad

If today's youth is degenerated, it is the law and order situation (which is quite disabled), defective education

TO OUR READERS

Due to a steep rise in production costs, we are constrained to raise the price of *Career & Competition Times* to Rs 5 from this issue. We regret the inconvenience caused and hope you will bear with us.

system (quite abortive) and frustration (due to unemployment and corruption) which are responsible. When shelter from law is not available, education becomes fruitless

Rishi N. Yagnic, Udaipur

Encouraging Feudalism

Public Schools: A Good Investment (Nov '84), strongly advocates public schools in favour of government schools. Why shouldn't there be equal opportunity for a child of an IAS officer and a rickshaw-puller? By promoting public schools we are indirectly encouraging feudalism at the cost of equality.

Sudhir Kumar, New Delhi

In every field, there is a demand for English-speaking candidates, especially at the time of interview or if you go to a non-Hindi speaking area. This is why public schools are more in demand

Kamal Nain Grover, Delhi

Baseless Accusation

The figures about the 1983 massacre, (*Sri Lanka*, Nov '84) stated as 350 (or 700 unofficially), are just one-tenth or one-fifteenth of the authentic figures. Moreover, your unnecessary indictment on the Liberation Tigers for the Madras Airport bomb blast is totally baseless. These accusations mar the already obscure image of the Tigers who fight for a noble cause

S. Manivennan, Madras

Banking Blues

What Does A Bank Look For In You? (Nov '84), was great. Regarding bank salaries, I want to point out that though Regional Rural Banks (RRBs) are a part of the banking industry, they are not paid salaries equal to the nationalised banks. I feel this is quite unfair for RRB employees have just the same duties as nationalised bank employees

S. Venkataratnam, Madana Palle (AP)

THE TIMES OF INDIA RELIEF FUND

As in the case of other calamities in the past, *The Times Of India* has decided to start a fund for the relief and rehabilitation of our Sikh fellow-countrymen who have suffered grievously in the wake of the shameful violence that swept a large number of towns and cities, including Delhi, following Mrs Indira Gandhi's brutal assassination. The publishers, Bennett, Coleman & Company, have made a contribution of Rs 1 lakh.

We appeal to our readers to contribute generously to this fund. It will not only provide the much-needed succour to the hapless victims of the storm but also, in the process, strengthen the foundations of India's unity, integrity and secular values. The names of contributors who donate Rs 100 or more will appear in the columns of *The Times Of India*.

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It's Not Cricket

If cricket is called the game of gentlemen, then its umpires should be non-partial gentlemen with sincere unbiased designs and balanced actions.

Gavaskar's backlash at the end of the match was a reprieve to the heinous deeds committed during the whole episode. Had he abstained himself at this initial juncture, who knows, things might have deteriorated further

Ajay Swami, Delhi

Corruption Reigns

Had "corruption" been the name of a girl, she would have been crowned Miss India.

Rajesh Kumar Agrawal, Hojai (Assam)

Genesis To Damnation

The world began with Adam; it should not end with atom.

Dinesh Kumar Chanchal, Gaya

Just Superb!

Your new features *For and Against* and *Analysis* are really excellent

Ashutosh Kumar, New Delhi

The crosswords are just superb. Solving them is great fun—and they help increase G.K. too

Dinesh V. Valke, Manipal

Jim's Project Tiger

Cof Jim Corbett killed 436 tigers in 1907 and today's National Park is named after him. A great tribute to our live Project Tiger!

M T. Pottaraju, Bangalore

Mistimed Decision

The UPSC decision to lower the upper age limit for the Civil Services from 28 years to 26 with effect from 1985 suffers from at least four shortcomings. First, it would deprive many a candidate from availing all the three chances if required. Second, the limit was raised to 28 years from 26 not even a decade ago. It allows rural aspirants to catch up with their urban counterparts who enjoy better facilities. Third, seniority is the first and foremost consideration in case of promotion to the same positions as are filled through this exam. Hence, loss of adaptability at 27 or 28 years is not a lame excuse. Finally, this decision is contraindicated by the increasing by two years the age limit for the Combined Defence Services for entry into the Indian Military Academy and the Officers' Training College

Pijush Kanti Dutta, Chatra (WB)

Sorry Prof!

This has reference to the essay on the UGC report on Central Universities (Nov '84). According to the essay the committee consisted of five members, but does not mention the name of Prof Ramesh Mohan, Director Central Institute of English and Foreign Languages (CIEFL), Hyderabad, who was one of the members. The CIEFL has the status of a Deemed University and is a Central University. Therefore, a representative from a Central University was not missing as stated by the essay

V.D. Singh, Lucknow

Opinion Poll

A Subhani from Patna feels that *Quarterly Review* is not essential in view of regular *Current Events* and *News Capsule*, and also because it leaves little room for analytical articles.

Do you agree with Subhani? We will welcome your views on this feature

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Hello folks...



Probably in no other country of the world has education undergone so much experimentation without much improvement and innovation. Each experiment has brought more chaos than order. After having tried every way to improve education our planners, educators and administrators have reached the conclusion that jobs should be delinked from degrees to reduce the admission rush to universities. The trial would enable universities to become better organised efficient institutions. The Planning Commission with a view to giving this idea a practical shape has asked the Indian Institute of Public Administration to prepare a note on delinking university degrees from jobs. The idea at first looks attractive. But if one probes deeper several questions arise. Even if the requirement of a university degree for a job is abolished will it really check the student rush to colleges and universities for higher education? Is the credibility of the state recruiting agencies like the State Public Service Commissions, Banking Service Recruitment Boards, Railway Service Commission etc. above board? Do employers reckon a university degree at its face value? Is the size of the university related with students' discipline and academic standards? Is university education completely worthless for our young boys and girls? Aren't a large number of jobs linked with degrees?

It is a myth that if degrees are not essential for jobs, the craze for a university degree would be over. Those who believe so have failed to understand the motives behind university admissions. The university population in India can be broadly classified into four categories. First, come those who belong to business or industrial

houses and join the university to get respectability by earning a degree. They also want a degree for matrimonial reasons because all good girls are at least graduates. The second category only wants to acquire political training. While the third consists of serious minded students who have academic pursuits, the fourth category joins the university because they have not been able to get admission in any professional institution or not found employment.

If degrees do not remain essential for jobs, only the last category will be affected. But in a situation where job seekers are a hundred times more than jobs, what is the option for those unfortunate who have not been able to get employment after 12 years of schooling?

The credibility of state recruiting agencies is to say the least murky. What goes on in the recruitment of officers and clerks is well known. Many months back a member of the Public Service Commission gave me a detailed *modus operandi* of selecting subordinate officers. I don't wish

IN MY OPINION

Exercise your polling rights now. Age no bar. The vital topic: 'Should jobs be delinked from degrees?' Mail in your opinions in about a 100 words latest by Jan 25, 1984. We'll be sending the weighty ones to the Planning Commission.

to reveal what he said and all I can say is that if the degree requirement is withdrawn and the selection is done by the existing agencies, the quality of those selected would definitely be affected.

There was a time when employer depended on a university degree. If one had a degree with good marks, employment depended on the impression the person created at the time of interview. Slowly employers stopped giving importance to the degree though it remained an essential condition. Now all public, private and government sector employers hold competitive exams to test the various faculties and qualities of the candidate, giving no credence to the degree. Ultimate selection depends on the overall impression created by a person after the exam, in the interview and group discussion. So the university degree has already been reduced to a railway ticket which entitles you to travel but does not ensure a berth in the compartment.

It is again a myth that if the number of students are reduced in universities and

colleges, academic standards and discipline will improve. In the capital we have a university of every size and things are no better where the number of students is less and no worse where the number is large. In fact, certain big colleges are better run and more reputed than several small ones. Efficiency is not a factor of size but of good management.

University education is not completely worthless and aimless. True, the ultimate objective of all education is to earn a good living. However, university education aims at much more. Jawaharlal Nehru believed that a college or university stands for the adventure of ideas and higher education was pursuit of knowledge which was necessary for training the mind. It helped develop logical reasoning and a scientific temper and established dynamic and beneficial linkage between education, employment and development. With this in mind, he developed a broad based strong infrastructure of higher education comprising universities, research institutes and training centres. We cannot say that institutions of higher education have produced worthless individuals. If they were worthless, then why should Indians trained in Indian institutions be considered the best employees and a large number of students from the Third World come to India for higher education?

A good number of jobs have already been delinked from degree. Army, navy and air force officers are recruited at the end of class ten and twelve, engineers, architects, hoteliers, medical doctors and merchant navy officers are selected for training after the twelfth, minimum qualifications for clerk, stenographer, cashier, godown keepers and typists are matriculation or equivalent. Then what is left are bank and insurance officers, selection (Central and State Civil Services and other recruitment) by the UPSC and the private sector.

We are of the firm opinion that it is unnecessary in fact unrealistic to dispense with degree requirements particularly for those categories of jobs where public dealing is concerned. If the idea is enforced, it would do more harm than good to the employee as well as employers.

R. K. Thakur

TEST YOUR WORD POWER

BY AYCEE



Tick the word or phrase you believe is *nearest in meaning* to the key word:

- aberration:** A: an illusion B: a falsehood C: a deviation from the normal course D: shortened form of a word
- apostle:** A: guardian B: preacher C: learner D: dictator
- cog:** A: measure of wood cut for fuel B: piece of wood used as a stopper for a bottle C: wood-wind instrument D: an unimportant part of a large enterprise
- colossus:** A: huge building B: heavyweight C: immense person D: tall, upright pillar
- convalesce:** A: to regain health and strength after an illness B: keep within limits C: form a plan D: rest at a regular interval
- cowardice:** A: helplessness B: faint-heartedness C: want of knowledge D: mindlessness
- creed:** A: system of beliefs B: unquestioning confidence C: over enthusiasm D: judgment
- demure:** A: petite B: shy C: pleasant D: dainty
- detonate:** A: to explode B: ruin C: hinder D: separate
- errand:** A: mischievous act B: short journey for simple business C: wrong opinion D: long tedious journey
- frail:** A: delicate B: sweet-smelling C: ill-tempered D: easy to handle
- grit:** A: harshness B: fineness C: firmness of mind D: rashness
- huddle:** A: to crowd together B: wait about C: talk hesitatingly D: move back in fear
- impotent:** A: powerless B: listless C: angry D: rude
- mandate:** A: secret voting B: body of persons having the right to elect C: constitutional right of a sovereign to forbid something D: authority given to representatives by voters
- paroxysm:** A: a sharp or sudden utterance B: undesirable course of action C: sudden and violent outburst D: strong feeling
- polyglot:** A: having many sides B: passing through many stages C: worshipping more than one god D: speaking several languages
- traumatic:** A: sad B: sudden C: emotional D: distressing and unforgettable
- vicissitude:** A: farsightedness B: narrowmindedness C: capacity to endure D: change of fortune
- void:** A: freedom B: empty space C: inactivity D: boundless extent

(Answers on page 66)

IDIOMS & PHRASES

- To pamper to one's taste:** to over-indulge. It is not good to pamper to a child's tastes when he is young.
- To pant after:** to desire something that is unattainable. It is unwise to pant after the moon, instead one should try to 'hitch one's wagon to the stars'.
- To pare and burn:** to cut grass and burn it for manure. Once the crop is ready, the farmers separate the seeds and pare and burn up the husks and grass.
- Pariah dog:** a social outcast. A Harijan 'thanks to Gandhiji's philosophy that expounds that 'untouchability is a crime against God and man', is no longer a pariah dog in a free society.
- An ounce of pluck is worth a ton of luck:** it is better to have courage and initiative than depend upon destiny to make one rich. Those who do well in life depend on pluck and not luck because an ounce of pluck is worth a ton of luck.
- Pari passu:** side by side. It is truly ironical that when education and culture go up, the rate of crime goes up *pari passu* in society.
- To part the hoof:** to have cloven feet. "Every beast that parteth the hoof."—Bible.
- To pass a wet sponge over:** to obliterate the memory of. Hindus and Sikhs should make an effort to pass a wet sponge over all that has happened hitherto, with good will on both sides.
- To pawn one's future:** to do something which adversely affects one's

- future. Foreign loans pawn the future of a country because service charges grow heavier and heavier with time.
- To make peace with:** to come to terms with. One should first make peace with one's conscience before making peace with the world.
- Persona non grata:** an unacceptable person. A diplomat if discovered to be a spy becomes *persona non grata* in the country of his assignment.
- To make a pile:** to earn much money. The garment exporters in India are making quite a pile for themselves because of the good foreign market for Indian cotton fabrics.
- To be pitted against:** to be a challenge. The rival candidates were pitted against each other in the elections.
- Plethora of problems:** many problems. India has a plethora of problems to tackle.
- To play ducks and drakes with:** to waste, squander. Youth should refrain from playing ducks and drakes with their parents' hard-earned money.
- To turn swords into ploughshares:** to end war and replace it by peace. India and Pakistan have not yet succeeded in turning their swords into ploughshares.
- To pattern upon:** to fashion; to model. Indian democracy is patterned upon the British system.
- To ply a trade:** to follow a profession. Byron wrote: "Ply some other trade/Save Censure, for critics are all readymade".
- To pour oil over troubled waters:** to pacify; to assuage. A politician adds fuel to fire, but a statesman pours oil over troubled waters.

QUOTABLE QUOTES

The true meaning of religion is this: not simply morality; but morality touched by emotion.

Matthew Arnold

Wisdom is the principal thing; therefore get wisdom: and with all thy getting get understanding.

Proverb

Meanwhile time is flying—flying never to return.

Virgil

If God made us in His image, we have certainly returned the compliment.

Voltaire

Truth is rarely pure, and never simple.

Oscar Wilde

This mournful truth is everywhere: confessed/Slow rises worth of poverty depressed.

Samuel Johnson, London

Every man is an unrepeatable experiment.

Anonymous

Conversation should be fired in short bursts, anybody who talks steadily for more than a minute is in danger of boring somebody.

Harlan Miller

One age blows bubbles and the next breaks them.

William Cowper

You only live once. But if you work it right, once is enough.

Fred Allen

Fortune brings in some boats that are not steered.

William Shakespeare

Principles without programmes are platitudes.

Bernard Shaw

People who want to cover up their own flaws look for weak points in others.

Heinz Caspers

You've got to love what's loveable and hate what's hateable. It takes brains to see the difference.

Robert Frost

Some people will believe anything if it is whispered to them.

Pierre de Marivaux

To love someone means to see him as God intended him.

Fedor Dostoevsky

Pay no attention to what the critics say. A statue has never been erected in honour of a critic

Jean Sibelius

RAJIV GANDHI TAKES OFF!

Can He Safe Land?

BY AJAY VERMA

On Oct 31, 1984, was a day of shock and mourning for over 700m Indians, for they had lost their leader, Indira Gandhi, who had guided their destiny for nearly two decades. To this national tragedy, however, there was a silver lining—the smooth transition of power. It was a reaffirmation of the democratic traditions which have now taken firm roots in India, that without any manoeuvring, much less bickering, Rajiv Gandhi was sworn in as the seventh Prime Minister of India. Any uncertainty at that critical moment in India's history would have sent the nation into turmoil.

The Congress Parliamentary Board met in New Delhi and recommended Rajiv as their leader to the President, who duly invited him to form the government. The decision was later unanimously endorsed by the Congress Parliamentary Party. The opposition parties, especially the DMKP and the BJP, did, however, question the propriety of the manner of installing the new prime minister.

Rajiv began his prime ministership on a sad note. Personal sorrow was aggravated by large-scale communal riots throughout the country. There was, temporarily, a complete breakdown of administrative machinery in most places, especially Delhi. The army subsequently succeeded in putting down violence with a heavy hand. The conflagration has subsided and normalcy is returning to the riot-affected areas.

The main task before the Rajiv Gandhi Government is to hold India together and make it possible for the general elections, which have been scheduled for Dec 24 and 27, to be concluded in a peaceful and orderly way. The Congress under Rajiv stands a good chance at the polls. But the elections will be the severest test yet not only for the new government but also for Indian democracy. Without the steadying iron hand of Mrs Gandhi, fissiparous elements may raise their ugly heads, particularly in Assam, Tripura, Nagaland, Punjab and Jammu & Kashmir. Thus, though an election victory is assured for the Congress at the hustings, the elections will be an "ordeal by fire" for the Rajiv Gandhi administration.

The immediate concern of the new government should be to restore public confidence in the law-and-order machinery. The



assassination and the bloody aftermath caught the police at their worst and no excuse can condone the criminal lapses during the nightmare of the first three days of November. A thorough overhaul is the need of the hour. The sacking of the Lt Governor and Police Commissioner of Delhi and senior security officers are steps in the right direction. But indifference and at times even connivance of the police in the riots has so dismayed and demoralised the people that cosmetic changes will not suffice. Discipline and dedication to duty will have to be instilled in the force, down to the constable.

On the economic front, Rajiv has a good opportunity to pull up the public sector and ask it to justify the heavy investment of public



The initial steps (left); Thanks for the confidence (above).

funds made in it. Fortunately, he is acutely conscious of it, as is evident from his first policy broadcast in which he declared that goals, not procedures, will have priority. The foodstocks and balance-of-payments situation is satisfactory and the economy is healthy. The policy of liberalisation initiated by Mrs Gandhi will have to be continued, as assured by the new PM. This will not only attract foreign capital but also the latest technology, if pursued in a planned manner. Time has come when utterances about meaningful economic cooperation with developing countries in South Asia, Africa and the Arab world would have to be made good in practical terms.

Foreign affairs, in general, can, for the time being, take a back seat. But efforts for normalisation of relations with the neighbours should continue. Notwithstanding the recent happenings at Nankana Sahib, the policy of good neighbourliness with Pakistan should not be relaxed. Ways should be found for the dialogue between India and Pakistan to resume in an earnest manner. As regards China, it was quite encouraging to see the country's vice-premier at Mrs Gandhi's funeral. His statements in New Delhi as well as other messages from top Chinese leaders augur well for further improvement in Sino-Indian relations. He has done well to reassure everyone that the basic postulates of the government's foreign policy will remain the same. Given India's stature and its chairmanship of the Non-aligned Movement, Rajiv Gandhi will also have to discharge his international obligations as and when required, despite his

present preoccupations with domestic problems.

It will certainly be in the interest of the country if Rajiv enlists the general cooperation of a sizeable section of the opposition parties at this critical juncture in India's history. Mrs Gandhi proved at the cost of her life that certain vested interests, both inside and outside the country, were out to destabilise India. Irrespective of party affiliations, it should be the endeavour of all patriotic parties and individuals to avoid wrangling and

backbiting which may make India vulnerable to the machinations of those not so well-disposed towards this country.

Perhaps in a way, Rajiv's accession to power is good and promising. The young generation, with no memories of the travails of the freedom struggle which united people, may find in him a leader they would identify themselves with. Rajiv with his youth, dynamism and "Mr Clean" image may well lead India into a resurgent nationalism, stability and progress.

The question of the 80s—*After India, who?*—was replaced by *"After India, who?"* in the '80s. Just as India was able to not only survive but also progress after Nehru's death, it will withstand the void created by the assassination of Mrs Gandhi. The challenges before Rajiv are formidable but not insurmountable. He has the nation's sympathy, an efficient bureaucracy, a well-trained, apolitical army and established democratic institutions and traditions to assist and aid him.

FROM PILOT TO PM

The pilot is in the cockpit but will India fly? Rajiv Gandhi, who was sworn in as India's seventh Prime Minister within hours of his mother, Indira Gandhi's brutal assassination, is as much of an enigma to Indians as he is to foreigners. He entered public life only four years ago after the death of his brother Sanjay Gandhi, who, to all accounts, was being groomed for political leadership and who showed a lot of political ambition and leaning. Rajiv, on the other hand, stayed away from the public eye to the extent that as the chief pilot of an Indian Airlines aeroplane, he used to introduce himself to his passengers as "Captain Rajiv" and not "Captain Gandhi".

His over-riding ambition was to fly sophisticated jet aircraft. But through the turns and twists of fate—or, one should perhaps call it circumstance since he does not put much weight on astrology and believes, instead, in 20th century science and technology—he is now at the helm of affairs of the world's largest democracy. How he pilots the state now is not only the concern of over 700m Indians but the whole world. He is the third of the Nehru family to hold this commanding post, but he is the one member of the house who never lusted for political power. Only recently, he had said that he did not want to take over his mother's role for "a long while", and that he was "happy to stand in her shadow and help to get her re-elected to another term, and still another after that". But after Sanjay's death, he was pressed into politics, not only by Mrs Gandhi, but by 300 MPs who petitioned him to take his brother's place and run for his seat in Parliament.

Rajiv was born in 1944 and studied in Doon School, Dehra Dun. Thereafter, he spent two years at the Imperial and Scientific College in London and two years at Trinity College, Cambridge, and

earned a degree in Mechanical Engineering. He returned to India in the mid-1960s, took up commercial flying as a career and was in the air for 14 years. On Sanjay's death, he quit flying and in June 1981, stood for a by-election in UP and won Sanjay's Amethi seat as well as his brother's place on the executive committee of the party's youth wing. He was named a General Secretary of the Congress(I) party in February 1983. Gradually he began to emerge as a leader in his own right and became the most powerful of the party's seven general secretaries. He formed a team of his own and with the help of his close associates, Arun Nehru and Arun Singh, both of whom have managerial backgrounds and who became Rajya Sabha members only recently, used his growing influence to virtually build a new party which was not always in line with the professed hierarchy in the Congress(I). What he was trying to do was to restrengthen the party structure from the shambles it had fallen to in recent years.

Now, by an unforeseen turn of events, he has become the country's youngest prime minister, and although there has been barely any opposition to his appointment, many senior politicians feel that he is a babe in the woods: a decent young man but does he have the political maturity or expertise to become the nation's premier? Unlike all the former prime ministers, he has not even held a Cabinet rank and seniors feel that he lacks maturity. According to a close associate of Rajiv Gandhi, he is "too straightforward and decent to understand that politics requires a certain amount of toughness".

However, it is perhaps these very qualities that the country needs now—decency and straightforwardness. Confronted with a personal tragedy and a national crisis, Rajiv behaved with a dignified calm which would do credit to any statesman anywhere in the world. Also appointed party President, Rajiv now faces a dual challenge. In his capacity as Congress (I) President, he will have to be fully involved in preparations for the fast-approaching elections. But his

immediate tasks as PM will remain pressing, and these are both political and administrative. Rajiv's first major policy-making broadcast shows his determination to move in the right direction. He spoke of not tolerating the "corrupt, the lazy and the inefficient", in the process dropping P.C. Sethi from the Cabinet, a minister whose rank inefficiency was quite evident but who had been tolerated by Mrs Gandhi. He also dropped Kalpana Rai, a muscleman-turned-politician, who had once invited Atal Behari Vajpayee to a wrestling bout in Parliament.

Rajiv also made a few other points which may give an indication of the line he plans to pursue. Emphasising that the quality of politics and civil services must be improved, he went out of his way to promise "full protection" to honest civil servants from political pressures. The country has a highly-trained bureaucracy which can be counted on to continue functioning even in a power vacuum. However, as a result of excessive political pressures and corruption, it had become difficult for honest bureaucrats to take initiative and work for the best interests of the country. It can be recollected that the excellent French bureaucracy kept the country running smoothly in the crisis period when there were innumerable change of governments in France.

Among other new points, the PM also mentioned that reward and punishment must be related to performance and a strong concern for efficiency must permeate all institutions. If this policy were to be followed to the letter, there would be added incentive to produce more. One of the main grudges of competent people in India is that merit has no reward in this country. If efficiency were given a higher priority and promotions on merit introduced in all sectors, there would be added enthusiasm for development in every field.

Very few days, however, have passed for a clear assessment of the new PM. With the oncoming elections, it will be up to the electorate to make their choice of a viable alternative to Indira Gandhi.

S.B.

PLANNING FOR PROGRESS

BY B.M. BHATIA

What India needs today is a thorough overhaul of the system of planning, not merely a tinkering with the objectives of each successive Five Year Plan. The Approach Paper to the Seventh Plan gives us a new slogan, 'food, productivity and employment'. Perhaps that is the only thing which is going to distinguish the next Plan from its predecessors. For the rest, the Seventh Plan is slated to run in the old grooves of the earlier Plans.

Over the years, planning in India has become a highly centralised bureaucratic affair in which the people have little part to play. Five Year Plans are drawn up by the Planning Commission and formally approved by the National Development Council (NDC) which consists of some Union ministers and chief ministers of all the states.

Scope

The NDC itself has, over the last two decades, suffered considerable shrinkage in the range of membership, scope and authority. It has been reduced to the position of a ceremonial body of state chief ministers and Central ministers which has no other function to perform than to approve whatever is placed before it by way of a Plan document.

The Planning Commission has meanwhile suffered a sharp decline in its prestige and power and, in consequence, become only another department of the government rather than an autonomous body of experts who command respect for their ability, integrity and expertise. Plan exercises have lost the seriousness of purpose and have come to be looked upon as the government's public relations efforts on the economic front. That explains why the Approach Paper to the Seventh Plan has attracted so little attention and prompted so little debate in public forums.

Two types of reforms are now necessary in the planning system. First, emphasis has to be changed from the size of Plan outlay and Gross Domestic Product (GDP) growth rate in a five-year period, to the progress made in solving the two basic social problems of poverty and unemployment. This means reorientation of planning from urban and large capital-intensive public sector projects to rural and labour-intensive small result-oriented enterprises. Secondly, planning should be debureaucratised and made a people's movement.

A macro-type planning may be necessary in the earlier stages of industrialisation when the infrastructure is to be created and the foundation of basic industries is to be laid.

That stage in Indian planning is now over. Henceforth planning must get down to the microlevel of village or a block. Conditions vary from place to place both in respect of opportunities available and challenges to be faced. Only a decentralised system of planning can take care of the differences that exist in a vast country like India in agro-climatic conditions, culture and customs of the people, availability of idle resources, development needs and several other factors.

Each area, village, development block, district and state must have a development plan of its own, forming an integral part of the overall national plan. People of that area will have to be given a hand. Necessary institutions will have to be created to ensure people's participation at each rung of a planning ladder from the village to the district or even to the state level.

We created the community development system, panchayati raj, zila parishads and district industry councils. These institutions are either dead or lying in a moribund state now. We must find out why they failed to achieve the objects for which they were created. The answer in each case is likely to be that what was intended to be a people's agency was turned into an administrative unit in the state's bureaucratic network. Official interference in the working of these institutions left little scope for people's initiative in improving their economic lot. Even the poverty eradication programmes, which in their very nature should be locally based, are highly centralised schemes for the distribution of Central largesse to the people through the bureaucratic machinery and public sector banks. Little wonder that their effect has remained confined to achievements on paper rather than any real improvement in the living conditions of the poor.

The Approach Paper to the Seventh Plan mentions resource constraint as the biggest hurdle in the way of future planning. According to it, domestic resource mobilisation has already been carried to a point where little scope is left for further effort in that direction. At the same time, prospects of foreign assistance are steadily shrinking. This scenario forces the planners to opt for the development strategy that they now advocate for the Seventh Plan.

Briefly, the strategy underlying the approach to the Plan is as follows. Because of the resource constraint encountered now, greater attention will be paid to agricultural and rural development schemes which are

less capital-intensive than industrial projects. Even in agricultural development, efforts will be directed to getting the maximum benefit from investments already made in irrigation, fertiliser production and power supply before making new investments in schemes involving large capital costs.

Thrust

In the industrial field the main thrust of the Plan will be towards fuller utilisation of the already created industrial plan capacity. Management of the public sector units is to be so improved that better returns are obtained on the capital investments made. A more vigorous effort will be made to step up the growth rate of exports. This is to be accomplished through increased efficiency and productivity of Indian industry so that Indian products acquire the necessary competitiveness in international markets. Import substitution will be further encouraged to reduce the country's foreign exchange gap. Poverty alleviation programmes like the IRDP, RLEGP and NREP are to be linked to capital construction works in the rural areas and administered to benefit the community instead of helping individuals.

In principle, the approach is unexceptionable. The difficulty lies in translating the good intentions into action. With the present system of planning this cannot be done. The question is: how long shall we go on, in the face of mounting evidence to the contrary, believing in the efficacy of the present system? Instead of being an instrument of growth, the system is proving to be a drag on development by its vexatious controls that inhibit enterprise and encourage corruption, wasteful public spending and high taxation. People not only pay directly in the form of taxes to maintain this inefficient system of planning; they also pay heavily in an indirect way as a result of chronic inflation.

According to a general index for retail prices in Greater Bombay, there was a 180.4% rise in consumer prices over the last 10 years from 1973-74 to 1983-84. This gives an average annual price rise of 18% in the 10-year period. While the figure relates only to one metropolitan area of the country and cannot be said to be representative of the situation in the country as a whole, it undeniably establishes the fact of the country having been in the grip of high rate of inflation in all these last 10 years. That is what the common man is gaining in concrete terms from the current system of planning.

Maybe, this was a coincidence and there was no casual relationship between the two. Still the fact remains that the Green Revolution in the country was conceived, and it burst on the scene, in the three years of Plan holiday, from 1966 to 1969. Despite the fact that we have gone through three Five Year Plans since then, the revolution has

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THE BHARATENDU YUG

BY MADAN GOPAL

Death came to Bharatendu Harishchandra at the young age of 34. But even in this short span he had carved a niche for himself in the Hindi world and a whole period in Hindi literature is called the 'Bharatendu Yug'.

In January 1985, the Hindi world observes the death centenary of Bharatendu Harishchandra, the father of modern Hindi. As a pioneer, who gave a new direction to Hindi, Harishchandra played such a vital role in the development of this language that a whole period in Hindi literature is called the *Bharatendu Yug*. The honorific 'Moon of India' was conferred on him originally as a derisive term, but later affixed to his name as a mark of recognition. Harishchandra liked this appellation and had the rising moon printed on his letterhead.

Born in Varanasi on Sep 9, 1850, Harishchandra startled experts, even at the young age of 14, by telling them that, in addition to the traditional nine *rasas*, there ought to be another four (relating to childhood, friendship, devotion and happiness). He had his own ideas about the Hindi language, which, in his time, was in its infancy. On the one hand there was the highly Persianised Urdu in Devnagri script advocated by Raja Shiv Prasad, Sitara-i-Hind, with full official support, and on the other, the Hindi propagated by Raja Lakshman Singh of Agra, who used uncommon and difficult words in his translated version of *Shakuntala*.

Harishchandra advocated the adoption of the spoken language or *khari boli*. This was the language that he used in *Kavi Vacha Sudha*, which, according to one expert, was the first Hindi newspaper to use chaste Hindi. In 1873, Harishchandra started the *Harishchandra Magazine* (later renamed *Harishchandra Chandrika*) in chaste Hindi prose. In *Kalchakra*, a chronology of important events in world history, written 11 years later, Harishchandra mentioned the evolution of new Hindi (Harishchandriya Hindi) as a landmark of the year 1873.

A direct descendant of Seth Amin Chand, who collaborated with Robert Clive and Mir Jafar before the Battle of Plassey,

Harishchandra's family were financiers to the Maharaja of Banares. As the family were well-regarded by the British, Harishchandra was appointed Honorary Magistrate at the age of 20 and, later, Municipal Commissioner. Often enough, he was assigned the task of showing members of the British royal family around Kashi, when they visited Banares.

Harishchandra grew up as a loyal subject of Queen Victoria, and there was no occasion in the life of the British royal family—be it a birth, a death, or even a recovery from illness—which he did not acknowledge with a poem. However, he did not get along with local British administrators, and raised his voice against the levy of taxes and the exploitation of the poor. This resulted in the withdrawal of 100 copies of his journal, *Harishchandra Chandrika* and *Bala Bodhin*, and also some of his books, including *Vidya Sundar*.

Scion of the richest family in Banares, the fastidious Harishchandra was a patron of music, poetry, works of art, antiques and rare books. He encouraged every move to honour poets or artists. He wanted good books to be distributed free or to be nominally priced. A philanthropist, he had wrought iron benches installed in the company gardens of Banares, and iron railings put up at the Manikarnika ghat, at his own expense. He travelled frequently and propagated anything novel, be it homeopathy or lithography. He bought watches and cameras, and presented them to friends and sycophants. His name was a byword for extravagance.

He gave away money without the least thought: once, he covered a beggar shivering in the cold with his own expensive shawl and walked away. He always made himself available for any good cause, and readily went around with a begging bowl for funds

Jauhary.

Harishchandra was in the forefront of many social crusades, be it for a ban on cow-slaughter or the adoption of Hindi as the court language. He also founded scores of societies and organisations, one of these being the Tadiya Samaj which made its members, including Harishchandra, take an oath to eschew meat and alcohol and to use only *swadeshi* goods. He was a strong supporter of women's education, and presented saris to new graduates from any university. On one occasion, Lady Ripon presented saris on his behalf to graduates of Calcutta University.

Two things always accompanied Harishchandra—a *paandan* and a portfolio of expensive writing pads in different colours, with ink and pen. Rajendralal Mitra once described him as a "writing machine": he wrote faster in Hindi than any Urdu or English writer. He wrote not only in Sanskrit, Hindi and Urdu, but also in Gujarati and Marathi. He wrote 18 plays and some 3,000 devotional and love songs in all conceivable metres and styles. He was undoubtedly the last Vaishnava poet of note. A pioneer in Hindi journalism, he was also the first Hindi dramatist and the first Hindi writer to compose travelogues. He encouraged poetry in *khari boli* and translation of novels into Hindi. He also encouraged several writers who carried the torch forward and came to be called the Bharatendu Mandal.

As welcome at the court of the Maharaja of Banares as among the folk composers sitting on the roadside, he came into close contact with people who visited Banares from India and abroad. They included Ishwar Chandra Vidyasagar who, in the preface to his *Shakuntalam*, expressed his deep gratitude to Harishchandra for his help. Keshub Chandra Sen thanked him for supporting the Brahmo Marriage Reform. Michael Madhusudan Dutt, Prince Keral Varma, Rajendralal Mitra, Col Olcott and Madame Blavatsky, and Surendranath Bannerjee were among those in whose honour he organised an "evening party" and also helped in raising revenue for the National Fund, a party which was later merged with the Indian National Congress.

Harishchandra projected Hindi abroad by presenting sets of his books to Queen Victoria, the Czar of Russia and the Kaiser of Germany. Sir George Grierson described Harishchandra as the "most celebrated of the native poets of the day, and a prolific writer who had done more for the popularisation of vernacular literature than almost any living Indian". And F.E. Keay wrote that Harishchandra's 175 works "exhibit his great desire for the progress of India and the development of its intellectual freedom". And all this before he died on Jan 6, 1885, at the age of 34.

Courtesy *The Sunday Statesman*

LOST & FOUND

The Sphinx, the rocky manmade lion that guards the great Pyramids at Giza, south of Cairo, lost its beard 166 years ago. The beard constituting two parts, each about a foot high, was smuggled to Britain and is presently in the possession of the British Museum. For the past three years, however, Egyptian authorities have been pressing for its return to prop up the 130-ton head of the Sphinx as archaeologists fear the head might collapse since the neck has been weakened by erosion. The British have agreed after protracted negotiations, to restore the Sphinx's beard—as a loan. It sure did take the Sphinx a long time to acquire a beard—and a loaned one at that!



Unpopular denomination.

The RBI, which came into existence on Apr 1, 1935, acts as banker to the Central and State governments, and also controls the banking system in the country. Its functions before its creation were performed by the Imperial Bank of India which was created in January 1921 by amalgamating three Presidency banks: (a) Bank of Bengal, (b) Bank of Bombay and (c) Bank of Madras.

Paper currency in India was started in 1862 by the British Government.

Notes of Rs 2½ denomination were issued during World War I in India. This was done to economise the use of silver due to its apparent shortage. The authorities considered re-introduction of this denomination during World War II, this time due to paper scarcity. The proposal was soon dropped as the denomination had proved unpopular.

Sir Osborne Arkell Smith, an Australian national was the first Governor of RBI from 1935-37.

The first Indian to become the Governor of RBI was C.D. Deshmukh (1943-49). He was appointed Finance Minister in the early '50s. In the line of succession, he was the third Governor of RBI, succeeding Sir James B. Taylor.

India experienced acute shortage of one-rupee notes and small coins during World War II. This was because of a phenomenal expansion of currency during the war and the very marked increase in demand for silver rupees and small change. Whenever the price of silver rose, the silver rupee coin disappeared from the market. People found that melting it was profitable. Among the steps taken to augment the supply of coins and rupee notes—

- Hoarding, specially of small coins, was discouraged. The government, on Jun 20, 1940, even promulgated a rule under Defence of India Act, making it an offence to acquire coins in excess of personal or business requirements.

- Available currency notes were put to maximum use and the usual standards with regard to their retirement were relaxed. Currency officers, Imperial Bank and the Treasurer were directed to reissue of serviceable notes on an extensive scale. As economy was affected by this, the usual standards of worthiness for circulation of currency notes were further relaxed by laying down that they could be withheld from circulation only if they were too dirty or torn and were unfit for reissue.

- Moreover, the practice of stamping notes, particularly by the Railways and government departments, and of recording of names by note examiners was discontinued to prevent spoliation of currency.

- During 1942-43, when the situation was quite serious, the RBI even thought of issuing notes in the denomination of Rs 20 (which had earlier been made in 1962), but the proposal was dropped because of some practical difficulties. Instead, a new denomination (that of a two-rupee note) was decided upon. They were brought into circulation in February 1943 and helped ease the situation to a considerable extent.

Demonetisation, or the withdrawal of currency notes from circulation, has taken place twice in India. Once during World War II and the second time, in January 1978, when currency notes of higher denomination of Rs 1,000, 5,000 and 10,000 were demonetised.

Devaluation of Indian currency has also taken place twice. The first

time in September 1949 and then in June 1966. Dr John Mathai was the Finance Minister in 1949 and Sachindra Chaudhury in 1966.

Alexander the Great established two cities in India and named them both Alexandria. One was in Afghanistan near Kabul and the second one was in Sind near the confluence of the Chenab and the Indus. However, both disappeared in later times.

A lawn tennis player who wins four major tournaments of the world in one year (not necessarily in a calendar year) is honoured with the title of **Grand Slam**. The tournaments are: US Open, French Open, Australian Open and the Wimbledon Open. Martina Navratilova (USA) won this privileged title in 1984 too.

The **Jules Rimet Cup** was given to the winner of the World Cup Football Tournament between 1930 and 1970, during which period the tournament was actually known as the Jules Rimet Cup. In 1970, Brazil won the cup for keeps as they were winning the tournament for the third time (the earlier two occasions being 1958 and 1966). The Federation of International Football Association (FIFA), the organisers of the World Cup Football Tournament, replaced the Jules Rimet Cup with the FIFA Cup. As a result, the tournament is also known as the FIFA Cup tournament.

An award for Best Feature Film was first given in 1953 by the Government of India and was known as the President's Gold Medal. **Shyamchi Aaiyee**, a Marathi feature film, was the first to get this award. In 1976, the name of the award was changed to **Golden Lotus**.

Lord Charles Cornwallis was the only British Governor-General (G.G.) to serve more than once as G.G. in India. He served from 1786-93 and then from July 1805-October 1805.

Panchsheel

The five principles of **Panchsheel** are: mutual respect for each other's territorial integrity and sovereignty; non-aggression, non-interference in each other's internal affairs; equality and mutual benefit; and peaceful co-existence.

Origin of the name

The first time the five principles of the Indo-China agreement were referred to as the Panchsheel was on the occasion of the Indonesian PM's first visit to India in September 1954. In an address to the members of the Indian Parliament on Sep 23, Dr Ali Sastroamidjono referred to the **Pantja Sila**, principles of the Indonesian philosophy of State. The same evening, Jawaharlal Nehru, speaking at a state banquet in honour of the Indonesian PM, described the five principles of the Indo-China agreement as "another Panchsheel" in the sphere of international relations. In Nehru's words: "This afternoon, Sir, you were speaking to Members of our Parliament and you referred to certain basic principles which govern Indonesia. You call them the **Pantja Sila**, which is from our Sanskrit word **Panchsheel**. We talk also of another Panchsheel or principles, which have recently come to the fore. You may call them Panchsheel also in the same way. Therefore, it is a good thing for us to hold up this new Panchsheel because it is the right thing and even though we may not live up to it completely, it shows us the right path and even though there might be some evil behind it, yet saying the right thing and trying to act up to it will gradually do away with that evil in the end."

Development of the idea

The principles of Panchsheel have now won recognition in a major part of the world. Soon after their formulation, they received almost immediate recognition in the final communique issued at the conclusion of the Colombo Conference of the PMs of Burma, Ceylon, India, Indonesia and Pakistan, held from Apr 28-May 2, 1954.

Chow-En-lai, the Chinese PM, during his visit to Delhi in June 1954, reiterated his faith in these principles in a joint statement issued by him and the PM of India on Jun 28, 1954. Two days later, the five principles were again restated in a joint statement issued by the PMs of Burma and China, at the end of their talks in Rangoon. The PM of Indonesia, who later visited India in September 1954, also lent his powerful support to these principles.

SHIV KUMAR

We invite readers to send us their queries on GK—provided the information being sought is not easily available. Of these a few will be selected for publication too. We regret that no direct correspondence will be possible. Do write to us at: GK, c/o Career & Competition Times, 10 Daryaganj, New Delhi-110 002

FOR & AGAINST

BY SANJUKTA BANERJI

Should the press be censored?

What would the world be without newspapers and journals? We would be back again in the dark ages when the most that concerned people was what was happening in the immediate neighbourhood. We have come a long way since then, and now the whole world is the concern of the individual mind. And all this is due to the invention of newspapers and news journals. Every morning, the individual is exposed to what is happening in the remotest little islands, and ponders over not only national events, but on the tensions of the two major power blocs, the coal miners' strike in Britain, apartheid in South Africa, and so on. And yet, various governments, including democracies, find it necessary to impose press censorship. Why? Opinion is varied on this question.

For

■ It is necessary for the press to be responsible since a vast number of people depend on it for correct news. However, there are a large number of newspapers in circulation and they vie with each other to capture the market. Since sensationalism is what sells, many newspapers are tempted to sacrifice truth for yellow journalism. When the press becomes irresponsible, it is sometimes necessary to impose censorship.

■ The press is a mover of opinion, a shaper of values, and plays an important role in the individual's moral make-up. It is, therefore, sometimes necessary to put a curb on what is printed: for instance, pornography and violence.

■ In times of crisis, it may be necessary to regulate news since the publication of the truth may have undesirable consequences. For instance, during times of communal troubles, if newspapers print the actual death toll, with photographs to back up their news, then it is quite possible that members of the victimised community may be goaded into retaliation. To give another example, during times of war, if the country is not doing too well and the actual facts are printed, it may well lead to the demoralisation of the entire country.

Against

■ Freedom of expression is the fundamental right of every individual in a modern democracy and a free press is an extension of this right. The government, therefore, should under no circumstance impose press censorship.

■ The press serves as a watchdog of the government. It is through newspapers that people get to know about governmental action. If the freedom of the press is curbed, the government can become arbitrary since it is the mass media which acts as a popular check on it day in, day out. Parliamentary elections are held over a period of time, so keeping an everyday check on governmental activities is a job which only the mass media can do.

■ It is through the mass media that the government can get to know about popular opinion. If censorship is imposed on the press, the government will only get a limited and coloured view of the reaction of the people to its programmes. To take an example, one of the major drawbacks that the government faced during the emergency between 1975 and 1977, proved to be press censorship. As a result of a muzzled press, the government did not get the correct feedback and wrongly judged the popular reaction to the various programmes that were implemented in this period.

■ In the absence of all the news, rumours tend to spread like wildfire. Popular curiosity and credulity leads to disastrous results when the press is muzzled. It is the duty of the newspapers to report all facts correctly so that people would know what to believe.

■ Investigative reporting plays a very important role in exposing social, political and economic evils, which would otherwise never become known. The exposure of the blinding of Bhagalpur under-trials, due to police atrocities, is a case in point. So is the expose on the infamous cement scandal involving former Maharashtra Chief Minister A.R. Antulay. Similar examples can be found in the US. Everybody is now familiar with the underhand dealings of former President Richard Nixon as a result of the press exposure of the Watergate Scandal. The massacre of unarmed North Vietnamese women and children by an American serviceman in a village called My Lai was exposed by a crack US freelance journalist Seymour M. Hersh. Often, the government would discourage such reporting because such events do not speak too well of the social and political systems of the country concerned. If such cases come to light, the government may wish to put them under the carpet through press censorship. The press, therefore, should not be censored because it acts as a safety valve and throws the floodlight on unsavoury elements in the social and political structure. If evils are exposed, the public would naturally wish to bring the evil-doers to book, reform the structure and improve the country's image.

■ A responsible press imposes a kind of censorship on itself without being told to do so. For instance, during the recent riots in Delhi, most of the newspapers played down acts of violence and did not publish inflammatory pictures. But by equal measure, they focussed continuously on the hardships faced by the victimised community, going to the extent of requesting its readers to contribute generously for the relief fund sponsored by them. If there is a responsible press, government-imposed press censorship is uncalled for.



■ If the press is not curbed, it may lead to straining of relations between countries. To take a recent case, relations between India and Sri Lanka took a downturn when an Indian journal published an article saying that Tamil guerrillas from Sri Lanka are being trained in the forests of Punjab. Tensions between Pakistan and India have often suffered because of the irresponsible reporting of the Pakistan press. Recently, a Pakistani newspaper published an article saying that a certain state of India was planning to attack Pakistan. This led to a certain amount of tension in the minds of the people of that state. It is, therefore, necessary to impose some restrictions on the press to prevent such situations from arising. It is also necessary to ensure that the press does not indulge in further terrorist activities.

GENERAL ELECTIONS THE FINAL LAP

The country is all geared to take the plunge. With the general elections for the eighth Lok Sabha (scheduled for Dec 24 and 27) barely a fortnight away, frenzied activity is going on in all political camps. For these elections, the Election Commission (EC) has recognised seven national political parties and 31 state parties. For the 515 seats being contested for, of the 542 Lok Sabha seats (i.e. excluding 14 seats in Assam and 13 in Punjab), an overwhelming number of 8,800 candidates filed in their nominations. However, of these several withdrew their nominations while 250 were rejected after scrutiny. But there are still over 5,000 left in the field. With the Congress, the BJP, the Janata and the DMKP to compete for 496, 225, 190 and 150 seats respectively, the contest promises to be exciting, hard-fought and well-won.

The state-wise break-up of the 515 seats is as follows: Andhra Pradesh—42; Bihar—54; Gujarat—26; Haryana—10; Himachal Pradesh—4; J & K—6; Karnataka—28; Kerala—20; MP—40; Maharashtra—48; Manipur—2; Meghalaya—2; Nagaland—1; Orissa—21; Rajasthan—25; Sikkim—1; Tamil Nadu—39; Tripura—2; UP—85; West Bengal—42; Union territories—17. The scheduled castes have been allocated 78 of these seats and the scheduled tribes 38.

Several new trends are emerging in the elections. For the first time ever in India's history there is a conspicuous lack of awe-inspiring, dynamic leadership—the lack of a “sure winner.” Mrs Gandhi's untimely departure has left everyone, including the Opposition, floundering helplessly. The ruling party has been deprived of her powerful stewardship while the Opposition of its sole target of concerted attack.

Also for the first time ever, the reins of Indian politics lie in the hands of the young. The trio of Rajiv and the two Aruns (Arun Nehru and Arun Singh) at the helm of our politics has reversed the existing trend of old cronies hogging the limelight. The focus has shifted a generation ahead to one definitely more idealistic and enthusiastic about action rather than futile hypothesising.

Surprisingly, among those contesting this time are several eminent bureaucrats, including Natwar Singh, and K.R. Narayan and journalists too. The world of politics has suddenly become a star parade as well, as several famous film personalities seem to be finding politics more interesting than acting. Whether these stars are there to stay or are just putting in guest appearances remains to be seen. The formation of several new independent parties, apart from boggling the minds of the voting public, have proved cumbersome for the Election Commission (EC) too. Larger and consequently more unmanageable ballot papers will be needed to accommodate new parties.

What is most heartening about the present poll scenario is that the EC is, for once, making its presence felt. It has issued a number of directives to the governments and ruling parties at the Centre and states on observance of rules and norms during electioneering. These include, first and foremost the ban on misuse of official machinery which includes government transport and staff for furtherance of party interest; as well as government money on advertisements. Bans have also been imposed by the EC on the monopolising of public places, vehicles and amenities for ruling party propaganda; on transfer of all officials involved in poll supervision work, including top district and state level police officials until the end of the elections; on politicians from laying foundation stones of projects or schemes of any kind or making promises of any facilities eg. construction of roads, provision of drinking water. Ministers and other authorities have also been forbidden from indulging in acts of motivated generosity which includes announcing any financial grants in any form.

There has been a sudden influx of several film stars into the political arena including superstar Amitabh Bachchan, Sunil Dutt and Vijayanthimala Bali apart from the existing film stars-turned politicians like NTR, Jayalalitha, M.G. Ramachandran and others. To avoid their publicity through their films, the EC has banned the screening of any of their films or film sequences on TV and broadcast of songs, film excerpts on radio till the time the elections are over.

For ensuring equal coverage to all parties on the TV and radio the EC itself has done the allocation of dates and time to be given to each national party to present its election manifestos and propaganda to the public at large. These media will not therefore be monopolised for furthering the interests of any one party or person.

These steps should go a long way in ensuring “free and fair polls”. The race is on in earnest now.

CATASTROPHE AT CARBIDE AVERTABLE

The Bhopal holocaust is just a portent of similar disasters which can follow in future. Scientific innovations while being good servants can, if not coupled with extreme caution and discretion when using them, prove to be bad masters. It is rather ironical that gas used for producing pesticide claimed over 2000 human victims in Bhopal on Dec 3 and rendered over 20,000 sick from the after effects of gas inhalation.

The tragedy occurred soon after 1 a.m. when pressure built up in a 45 tonne capacity gas chamber and caused the leakage of methyl isocyanate (MIC) liquid gas at the Union Carbide insecticide plant. (This multinational plant is one of the two plants of this kind in the world, the other being located at West Virginia in the US). By the time the leakage was detected the lethal gas had spread and hung heavily in the atmosphere. Residents within a radius of 15 km of the plant were severely affected by the poisonous emission.

THE KILLER GAS

Methyl isocyanate (MIC), the killer gas responsible for the shocking death toll in Bhopal, is a product of deadly phosgene gas and methyl cyanate. And phosgene gas (itself a reaction product of toxic gases like carbon monoxide and chlorine) reeks of the gory history of World War I when the German and American troops used it to eradicate each others' troops. Hitler used it too, in his infamous gas chambers, to ruthlessly eliminate 60,000 Jews.

While not being as poisonous as phosgene, MIC inhalation can have fatal results too. A highly toxic chemical with low tolerance level of two parts in 100 million; it reacts with water of the lungs when inhaled and chokes the inhaler to death. Essentially a liquid, it becomes a gas when in contact with air because of its low boiling point of 21°C and thence gains easy passage into the body where it can react with proteins and also destroy enzymes in the human blood.

Experiments conducted on the lethal impact this gas can have on animals have revealed that dogs cannot survive exposure of this gas for more than 20 minutes at the rate of 29 PPM (particles per million unit), cats suffer pulmonary damage within a few minutes of exposure at 13 PPM and mice die within 15 minutes.

When inhaled by human beings it causes breathlessness, choking, nausea and vomiting, pain in the chest and pain and a burning sensation in the eyes. Further inhalation causes death due to suffocation and poisoning of the blood stream. No experimentation is needed to ascertain its impact on human beings. The loss of over 2,000 lives and the hospitalisation of over 20,000 is evidence which is explicitly and horrifyingly self-explanatory.

What ensued was the grotesque unfolding of a death-drama. People awoke to a panic and poison-laden atmosphere. Breathless, giddy, retching and choking from the effects of MIC, they fled in confused desperation to the unpolluted haven of neighbouring towns. The unlucky ones were suffocated to death even as they slept while others fell unconscious on roads as the gas, the haste and the cold took their toll. Large numbers of cattle were also sacrificed on the altar of negligence.

Hospitals overflowed with people clamouring for medical attention. This caused an expected shortage of drugs and doctors in the prevailing chaotic circumstances. The sorting out of the dying from the dead became an awesome task.

in the tragedy and also issued a grant of Rs 40 lakh from the Prime Minister's relief fund for the assistance of the ailing. Troops were summoned for evacuating people to safer places and for providing medical aid. Five officials of the Union Carbide unit were immediately arrested for the lethal lapse in management.

The immediate closure of the factory was ordered and as a precautionary measure its counterpart in West Virginia was also closed down. Not even the similar incident which occurred in the north Italian town of Seveso in July 1976 or the nuclear accident in Harrisburg in USA assumed the mammoth proportions of the Bhopal mishap in terms of the colossal loss of human and animal life.

It will take quite some time before Bhopal becomes safely habitable again. And this gruesome episode has left in its wake uncertainty and terror. For death can stalk silently upon hapless victims—extinguishing life even as they clutch on to food for sustenance: a dead man with bread lying on his chest.

THAKKAR COMMISSION THE PROBE BEGINS

In the wake of Mrs Gandhi's brutal murder the government has constituted a one-man commission, consisting of Justice M.P. Thakkar, a sitting member of the Supreme Court to inquire into all the facts connected with her assassination. The commission will submit its report within a period of six months.

Apart from uncovering all the relevant facts concerned with the assassination, the commission is required to probe into various other facets including the identifying of persons/agencies involved in the conspiracy while exposing it in all its ramifications, finding out lapses of duty by individuals as also speculations on whether the tragedy could have been averted. After inquiring into the deficiencies existing in the security system, the commission will also be expected to recommend corrective measures which can be implemented in future.

The Thakkar Commission has been appointed under Section 3 of the Commission of Inquiry Act "for the purpose of making an inquiry into a definite matter of public importance, namely the assassination of Smt Indira Gandhi, the late Prime Minister, on Oct 31, 1984". All the provisions of Sub-sections (2), (3), (4), and (5) of Section 5 of the Commission of Inquiry Act have also been made applicable to the commission whose headquarters will be in New Delhi.

The commission may make interim reports to the Central Government as and when it deems necessary before the scheduled time for submission of the report.

It will be assisted in its task by an investigating machinery headed by Anand Ram, one of the senior-most police officials in the country and also by different branches of the police and intelligence organs of the government.

PUNJAB REBOUNDED BACK

While the country is all set to go to the polls the government has wisely decided against conducting elections in Punjab even though, allaying all fears, the law and order situation has remained commendably stable. The violence which rocked the country following Mrs Gandhi's assassination left Punjab unscathed.

But politics and polls are prevailing in Punjab too—those of the Sikh Panth. The Shiromani Gurdwara Prabandhak Committee (SGPC) proceeded to hold elections for office bearers and for once the five head priests refrained from intervening in its affairs. They advised the members of the SGPC to decide the issue by secret ballot.

The results of the SGPC polls are as follows: Gurcharan Singh Tohra, detained Akali leader, was re-elected for the thirteenth consecutive term as President of the SGPC by a comfortable margin; Prem Singh Lalpura, Senior Vice-President; Rajinder Singh Dhilliwal, Junior Vice-President; Kuldip Singh Wadala, General Secretary. Lalpura will work as acting President in Tohra's absence.

The SGPC will now start working actively again—it will chalk out the party's future policies and programmes, and also prepare strategies for opposing the Congress candidates in the Lok Sabha polls. The formation of relief committees to help victims of the recent violence as well as the draft of a programme to pursue cases of Sikhs arrested during and after the army action in June in the Golden Temple complex will also figure extensively in the SGPC's programmes.

The SGPC has already demanded a high-power judicial inquiry into the army action. While expressing its sympathies with the victims of the car-

menet for not allowing the five head priests to visit Delhi and other affected areas. All, then, is not well for the restoration of amicable relations between the government and the Sikh Panth. And even though the Centre has its hands full at the moment what with the elections looming large, it would be a dangerous folly to neglect Punjab at any cost.

OPPOSITION UNITY IN OPPOSITION OF UNITY

At a time when the ruling party's hold over the nation has been substantially jeopardised with the exit of Mrs Gandhi one would have thought the Opposition would strengthen its fortress to make it a strong if not invincible enemy. But it has failed miserably to even put up a facade of unity. In fact, if anything, its internal squabbles have intensified at the onset of the elections.

The formation of the Dalit Mazdoor Kisan Party (DMKP) by Charan Singh was intended to unify the Opposition. But far from achieving a modicum of that, the DMKP has succeeded in alienating individual opposition parties even more. The Bharatiya Janata Party (BJP) headed by the Opposition stalwart Atal Behari Vajpayee was openly antagonistic towards the DMKP and all it stood for right from the start. And this sounded the death knell for the National Democratic Alliance (NDA) between Charan Singh's Lok Dal and BJP. The seven-party United Front of Chandrashekhar's Janata Party was also disrupted with the desertion of the Democratic Socialist Party and the Rashtriya Congress.

Finally conceding that achievement of unity was a farfetched idea the Opposition then diverted its efforts towards resolving the problem of seat adjustments. Some headway was made in this direction, thanks primarily to the efforts of N.T. Rama Rao, Andhra Pradesh's once-aggrieved CM and Farooq Abdullah, ousted CM of J & K who called for collective Opposition meets in Delhi.

As of now, however, it is difficult to predict the turn of events even to the last day before the polls, taking into consideration the fickleness of those standing for the elections. The DMKP and Congress (J) of Jagjivan Ram have, according to latest indications, reached complete accord on seat adjustments in Haryana, UP and Bihar, collectively comprising the Hindi belt. And according to the DMKP's spokesmen, the party has reached complete accord with "all the major opposition parties" in Delhi as well as in Karnataka, Andhra Pradesh, Tamil Nadu, Kerala and Gujarat. It is also hopeful of an accord in Bihar and Rajasthan. But whether these accords are strong enough to resist weathering and erosion in the coming days and face up to defeat or victory remains to be seen.

DISSIDENCE IN CONGRESS (I) ON TO GREENER PASTURES?

Dissidence, deception, defection have become the hallmarks of the Indian political trade these days. Never had these assumed such mammoth proportions as of late, especially since Mrs Gandhi's death. Suddenly all decorum, code of ethics, loyalty to person or party has disappeared leaving behind chaos, where anyone can do what he feels like and get away with it too. Loyalty has in fact become a saleable pendulating commodity available to anyone willing to pay the price.

The dissatisfaction over the denial of tickets has been vociferously expressed and open revolts in defiance have been staged. Of these, the ones which have caused major political upheavals include those of Abdul Rahman Antulay, former Maharashtra CM; Shivaji Ganesan, popular film star, MP and Chairman of the Tamil Nadu Congress Committee; and the exodus of MLAs from the Bihar and Manipur Assemblies as well as others scattered all over the country.

The Manipur Congress(I) Ministry headed by CM Rishang Kershing lost its majority in the 60 member State Assembly when 14 Congress MLAs tendered their resignations to the Governor K.V. Krishna Rao. The step was taken when they were denied party nominations in protest against "the changes in the political situation in the state". Among those who resigned was the Speaker Y. Yaima Singh. The Kershing Ministry which initially had 43 MLAs was left with only 29, and 14 departed MLAs promptly joined hands with Opposition members in the State Assembly and demanded the dissolution of the ministry since it had no moral or constitutional right to continue. The crisis, however, blew over and the ministry regained majority a couple of days later when one minister withdrew his resignation when allotted a party ticket to contest the elections.

The former CM of Maharashtra, A.R. Antulay, notorious for his earlier exploits too, lived up to his reputation for trouble-making when he openly revolted against the Congress after being denied a Lok Sabha ticket for the Kolaba (Raigarh) seat. Antulay went to the extent of calling for a split in the

...the social, economic and political policies of Mrs Gandhi". However, his act did not go unpunished—and he was expelled from the Congress(I). Undeterred, Antulay is not only continuing his candidature as an independent candidate in Kolaba constituency but has also formed a regional party "Indiravadi Maharashtra Congress Party" which he hopes to convert into a national party.

Bihar did not emerge unscathed from this tide of revolts either. Nov 27 witnessed open rebellion against the Congress leadership by the disgruntled few not granted party tickets. At least three members of the Assembly staged a walkout and are now to contest as independents. This defiance is significant in that these MLAs won by convincing margins in the 1980 elections and will now pit their strength against relatively inexperienced Congress nominees.

This brings us to Tamil Nadu and Shivaji Ganesan. Chairman of the Tamil Nadu Congress Campaign Committee, Ganesan, dissatisfied with the seat allocations, threatened to walk out of the Congress(I) too, and form a party of his own. But, at this stage, he wisely opted to hold talks with the Centre first and this resulted in an understanding being reached between him and the Congress high command so that now, once again, Ganesan sits in the Congress camp and will be campaigning for the party actively in Tamil Nadu.

The Congress, on its part, watched these new desertion dramas unfolding rather helplessly but later did issue statements to the effect that defectors would be penalised. But even if prodigals do return to the fold, either due to a belated sense of loyalty or from fear of reprimand, they will be bringing with them the danger of the few black sheep spoiling the entire flock.

RAJIV GANDHI

A PROMISING PRELUDE

"Rajiv is seen as pragmatic, cautious and practical—the first leader with whom India's disgruntled classes can identify," is the *Observer's* (of UK) observation of India's new PM. And for a person so happily oblivious to the world of politics until as recently as five years ago, this certainly is no mean tribute.

Rajiv Gandhi's initial steps are definitely not as tottering as expected from the new political entrant suddenly entrusted with a job as demanding as that of prime ministership. Even while Mrs Gandhi's body lay in state and the law and order machinery of the entire country lay in shambles, Rajiv went about the task of restoring normalcy in the strife-torn country with an iron hand. CMs of various states who had come to mourn Mrs Gandhi's death were promptly dispatched to their respective states to manage affairs. Then sweeping changes were made in the intelligence and security set-ups which had shown such dismal performances. The Lieutenant-Governor of Delhi was also dismissed. And all the while, Rajiv kept his personal emotions in tight rein for which he won the applause of leaders and the press worldwide.

The personal tragedy he suffered did not deter Rajiv from going about his functions with swiftness. In his first few addresses to the nation he stressed the need for maintaining peace and building a strong and united India. He also pledged to fight corruption and inefficiency. He made a call for improvement in quality of civil services and for depoliticisation of the administration as well.

Even while continuing in the traditions set by his mother, Rajiv clearly took a stance of his own too. That he is a product of the younger generation is left in no doubt when one sees his inclination towards modernisation. His emphasis on indigenous research and development to take care of the country's future needs coupled with the stress he lays on modernisation of technology, predict technological advancement under his regime.

Rajiv is also striving to nurture the relations built with various foreign countries by Mrs Gandhi. Several countries have extended their hands in friendship to him.

But what perhaps has earned him the respect of even staunch Opposition critics is his upholding of democratic values. His announcement of elections which have been preponed (contrary to their expectation of them being postponed) indicate his aversion to either dictatorial or dynastic rule. He is also living up to his reputation of Mr Clean and has, for the forthcoming elections, eliminated several notorious contenders from the race. This has, undoubtedly, earned him several enemies but has improved the Congress image overall.

Rajiv has inherited his office from colossals like Nehru, Shastri and Mrs Gandhi and making his mark will prove no mean task, if he wins. As the *Observer* puts it: "By the time the dust has settled down, Rajiv Gandhi will be seen as Prime Minister by right, not only by inheritance." Whether this statement proves right depends first on the people and then on him.

SOME GOOD WORK

For the third time in four successive years, a cyclone ravaged the south-eastern districts of Andhra Pradesh and the adjoining areas of Tamil Nadu. A cyclonic storm of particularly severe intensity, it lashed the coastline of Andhra Pradesh, covering Nellore and Prakasam districts. And yet again, it wrought havoc leaving behind a trail of destruction.

Early meteorological warnings of the approaching cyclone, the repeated warning issued over the radio and television and timely and prompt measures taken by the concerned authorities including evacuation of people went a long way in keeping the toll low. The cyclone claimed about 350 lives compared to the thousands lost in earlier similar catastrophies. However, it did succeed in devastating vast inhabited areas, destroying crops, damaging crucial sources of minor irrigation as well as disrupting road, rail traffic and telecommunications. Over 11.5 lakh people of 633 villages were left to reassemble the shambles.

It goes to the credit of the authorities that urgent relief and speedy rehabilitation was provided to those affected and attention paid to the restoration of the battered economy. IAF and navy helicopters and vessels as well as army personnel were deployed for organising relief work.

The PM immediately rushed to the stricken areas and made an aerial survey in the company of the Andhra Pradesh CM and Tamil Nadu officials. He also sanctioned a grant of Rs 12 crores to the cyclone hit states (Rs 7 crores to Andhra Pradesh and Rs 5 crores to Tamil Nadu). But it will take quite some time and concerted efforts before the losses can be recouped.

N.T. RAMA RAO

SPRINGING SURPRISES

Over the past couple of months the political scenario in Andhra Pradesh has had a remarkable likening to an action-packed suspense thriller. The ex-cine star and CM N.T. Rama Rao, with his unpredictable political manoeuvres, has the viewers at the edge of their seats and nobody quite knows what to expect from him anymore.

In a surprise move upon his return from New Delhi, where he had been engaged in promoting Opposition unity, NTR decided that he would like to seek fresh mandate. Armed with a memorandum signed by 164 MLAs (some belonging to "friendly Opposition" parties) endorsing the dissolution to eliminate the possibility of the governor forming an alternate government, he urged S.D. Sharma to dissolve the Assembly. Thus, on recommendation of the Telegu Desam Government, the Governor S.D. Sharma dissolved the 22-month-old sixth Andhra Assembly under Article 174 (2) (B) of the Constitution. Predictably NTR was asked to continue as head of the caretaker government.

According to NTR, he had resorted to this step keeping in view the development in the state which negated people's verdict and polluted the political atmosphere. And with this, he hopes to put an end, once and for all, to the politics of deception and defection. Also, he reasoned, holding elections was not only desirable but imperative in order to strengthen democratic principles and safeguard the interests of the people even though the ministry continued to enjoy the confidence of the Assembly.

But dissolution of the ministry had been on the cards ever since NTR was reinstated CM on Sep 16, although NTR himself had taken pains to dispel any notions of this.

In fact he had, in the not too distant past, disclaimed rather emphatically the dissolution of the Assembly. Twice in the last two months he had expanded his ministry and in order to strengthen the Telegu Desam hold over the 294 member-Assembly (reduced from 200 to a mere 148 after Bhaskara Rao's defection), had even inducted defectors into his camp. In an attempt to placate his supporters while expanding his ministry he went to the extent of bifurcating several public corporations to make room for more chairmanships.

Despite all these moves, NTR was at all times faced with the omnipresent threat of the unmollified few left out of offices of profit crossing the floor into other more lucrative camps. Which is probably why he opted for seeking fresh mandate in spite of the motivated protests made by Bhaskara Rao and K. Rosaiah, leader of the 54-man Congress Legislative Party in Andhra Pradesh.

And when the dissolution of the Assembly was announced and speculations were rife about the results of the elections which every one assumed would be held on Dec 27, NTR rolled yet another dice. He ruled out the possibility of simultaneous polls for the Lok Sabha and state Assembly because he felt that time for preparation of lists of candidates was not sufficient and neither were there enough ballot boxes to conduct simultaneous elections. The proposed date now for the Andhra Pradesh

Probably the off-chance of the Congress(I) retrieving some of its lost ground because of the sympathy generated by Mrs Gandhi's death and possible defection in view of the unpredictability of the Lok Sabha elections has made NTR overcautious. He wants to see the outcome of the polls and then prepare his future moves accordingly. He also wants to ensure that he is not caught unawares in the midst of another crisis. At the moment then, NTR is content with keeping a low profile. All said and done, NTR has everyone agog with excitement and anticipation for what promises to be a nail-biting climax!

PAUL vs ESCORTS

NO RAJ FOR SWRAJ

On Nov 9 the Bombay High Court judgment on the controversial Swraj Paul vs Escorts case gave it an entirely new turn. The Managing Director of Escorts Ltd, H.P. Narada had filed a petition earlier this year challenging the legal and constitutional validity of certain circulars of the Reserve Bank of India (RBI) dated Sep 19, 1983, relating to the eligibility of the purchase of Escorts' shares by the Caparo Group of Companies controlled by the London-based Indian industrialist Swraj Paul. These circulars had conferred eligibility even on Non-Resident Indian (NRI) companies to purchase shares in Indian companies in which NRIs held the minimum of 60% shares only indirectly, retrospectively under the portfolio investment scheme.

The bench consisting of Chief Justice K. Madhav Reddy and Justice D.M. Rege has categorically declared the Caparo group's purchase of shares as invalid and illegal. Invalid because it has been found that the NRI holding in the Caparo group was not the stipulated 60 per cent or more at the time that Paul made the share purchases (the court disallowed the Sep 1983 circular permitting these purchases with retrospective effect), and illegal because these purchases were made through the Punjab National Bank without obtaining prior permission from RBI. Under Section 29(1) B of the Foreign Exchange Regulation Act (FERA) the RBI's prior permission is mandatory and any purchases made without it are held illegal and are liable for action under Sections 50 and 57 and prosecution under Section 56.

Another aspect of this multi-faceted case was the participation of the Life Insurance Corporation (LIC). The LIC, a public sector institution, along with other government owned financial institutions, own 53% of the shares in Escorts. They had linked up proposals to accept pre-payment of loans and the merger of Escorts with Goetze with the issue of registration of transfer of the Caparo shares. Apart from this, the LIC had acted arbitrarily when having failed to force Escorts to register shares, it had requisitioned an extraordinary general meeting (EGM) of Escorts on Feb 11 in a bid to replace nine out of the 15 directors of the company with nine nominees of financial institutions having majority shares. By this action the LIC violated Section 14 of the Constitution as well as Section 284 of the Companies Act. The bench, therefore, has declared null and void both the EGM as well as the resolutions it passed.

The verdict of the Bombay High Court, thus, viewed in isolation, indicates that public sector institutions like the LIC are not ordinary shareholders in the corporate sector and cannot, therefore, dictate terms, even though the majority of stocks may be held by them. Meanwhile the Supreme Court, on Dec 10, decided to stay the High Court's judgment and fixed Feb 26 for the final hearing of the LIC appeal challenging it. Till then, the future of NRI investments as well as the link between financial institutions and the corporate sector remains undecided. Also, complete confusion prevails regarding the fate of the nearly Rs 13 crores invested by Swraj Paul's Caparo group in Indian companies.

COMPUTER POLICY

MADE IN INDIA

The government's announcement of a new liberal computer policy bodes well for the country in terms of providing long-term benefits of computerisation as also helping in overall efficiency and price reduction with respect to a broad spectrum of items. The policy aims at indigenisation and standardisation of technology and is expected to bring down the prices of the final product and computer components to international competitiveness levels. It also ensures the induction of the best available technology into the Indian markets and will, undoubtedly, go a long way in closing the gap between the developed and developing countries.

Radical changes in policy and procedures for manufacture, import and export of computers and computer-based systems have been brought

puter industry include abolition of existing restrictions on the organised sector on manufacture and capacity, permission for foreign collaboration with 40% equity participation for making mini and micro computers in the private sector and above all, the formal classification of the computers and computer-based system under the electronics industry. This will enable the new units to avail of the benefits and concessions available to this industry.

In accordance with the new policy the duty rate on parts for manufacture of peripherals (which account for 58% of the price of computers) and micro-processor-based equipment has been slashed from 80% to 5% while the rate of duty on software in object code in any media from 100% to 60%.

Import duty on software in source code has been withdrawn altogether to facilitate the adaption of computers to Indian requirements. Imports of software as printed matter on paper will be allowed duty free as against the present level of 100% duty. Duty rate on imports of software in source code other than printed matter has also been brought down from 100% to 60%. The rate of duty on full-fledged computers has been reduced from the existing 135% to 60%. Import of computers, computer-based systems and sub-systems will henceforth be permitted to actual end users only.

Meanwhile, the Department of Electronics (DOE) will keep making periodical recommendations of progressively lower levels of duty in an effort to make local manufacturers more competitive with respect to equivalent imported systems. Import of designs and drawings will be allowed on an open general licence for research and development units.

The policy will hopefully help achieve "modernisation of technology and application of computers"—needs stressed by PM Rajiv Gandhi. It is estimated that because of implementation of the liberal policy, demand for mini and micro computers will soar to 100,000 a year by the end of the Seventh Plan.

Also, with the liberalisation of domestic manufacture, domestic computers will be able to compete progressively with their foreign counterparts on which sufficiently high duty will be levied. India, then, stands on the threshold of the 'Computer Age'.

ON FERTILISER IMPORTS

FOOTING A HIGH BILL

The growth in fertiliser consumption has picked up considerably. Domestic production, despite the excellent performances of plants run by National Fertilisers Ltd, Rashtriya Chemical Fertilisers, Indian Farmers Fertilisers Cooperatives and Madras Fertilisers, has not shown a corresponding increase. While the consumption of fertilisers is expected to go up from 77.92 lakh tonnes last year to 86.5 lakh tonnes—an increase of 8.58 lakh tonnes—domestic production is likely to rise by 3.37 lakh tonnes only. The subsequent spurt in demand has compelled India to import massive quantities of fertilisers.

Between April-October this year the purchase of urea has touched the 16-lakh tonne mark while those of phosphatic fertiliser and muriate of potash, the 10 lakh tonne and 19 lakh tonne marks respectively. These purchases have been valued at Rs 700 crores and still the quantity imported has been insufficient to meet the growing demand.

The Union Agriculture Ministry is tapping all possible sources of fertiliser supply including Pakistan and USSR in an attempt to avert any shortfall in availability as this could severely affect foodgrains production. The target fixed for the current year is 153.6m tonnes and foodgrains production will not be allowed to suffer for want of fertilisers at any cost whatsoever. Shipment schedules for quantities already contracted are being advanced apart from contracting fresh supplies.

The rising trend in fertiliser prices in the world market is expected to make the fertiliser import bill substantially high. According to rough estimates it may even exceed Rs 1,200 crores. Heavy purchases by India and China together with outstanding demands from Indonesia, Philippines and several other countries have resulted in a shoot up in urea prices. The urea prices now are well over \$180 a tonne compared to \$105 a tonne in 1982.

Rather than attempting to rectify the situation, plants operated by the Fertiliser Corporation of India (FCI) and the Hindustan Fertiliser Corporation (HFC) have shown consistent dismal performances. The FCI has incurred losses of Rs 101 crores while the HFC over Rs 85 crores over the past few years while operating at low capacities. A lot of wasteful expenditure is also being incurred. It is high time some drastic measures were taken to improve the domestic production performance and decrease heavy reliance on import of fertilisers.

(Continued on page 60)

US ELECTIONS

REAGANISING THE COUNTRY

"You ain't seen nothing yet," promised President Ronald Reagan on his re-election to another five-year term as President of the United States. But what the world saw in this election will be worth remembering for a long time to come. He won by a margin of 59% to Mondale's 41%, and received 525 electoral votes, which is a record. He swept every state except the District of Columbia and Mondale's home state, Minnesota. He received 61% of the votes of the elderly people and 59% of the votes of the under-25 age-groups. Despite Geraldine Ferraro's candidacy for the Democratic Vice-presidency, women backed him by a 10-point margin. What is even more surprising is that 54% of Italian-American women, to which hyphenated group Geraldine belongs, voted for Reagan. He received 62% of the southern votes and 55% of the votes of the north-eastern states. The normally-Democratic Massachusetts and Rhode Island gave him 52% of the votes. Only the blacks voted solidly for Mondale, but the effect of the black swing vote in the southern states, where they reside in large numbers, was upset by a 70% white southern vote for Reagan.

Reagan's victory was, however, a personal victory. The Democratic Party gained two seats in the Senate and in the House of Representatives, the Republicans could gain only 15 seats. Potential 1988 Democratic presidential candidates like Senators Bill Bradley (New Jersey) and Joseph Biden (Delaware) won with easy margins. Speaker Tip O'Neill will continue to reign in the House with a more-than-65-seat Democratic majority. The Democrats also hope to regain control of the Senate during the mid-term elections of 1986. The defeated Mondale said with quiet dignity: "Do not despair. This fight didn't end tonight, it begins tonight. I've been around for a while and I have noticed in the seeds of almost every victory are to be found the seeds of defeat, and in every defeat are to be found the seeds of victory. Let us fight on."

Now that Reagan has won a landslide victory, what does he plan to do in the next four years? The world got a glimpse of his plans during his first post-election Cabinet meeting. On the question of the heavy Federal budget deficit, Reagan declared that he was "not in a compromising mood", since the nation had voted against tax increases and for further cuts in spending. He also said that he was against cutting back on his defence build-up and claimed that there was "plenty of fat" elsewhere in the Federal budget. During an interview with *Newsweek*, he stated that about \$100b was not being collected from taxpayers who evaded taxes. He, therefore, said that an easy solution was to broaden the base and simplify tax collection, and the income from that would meet the Federal deficit. He also aired views about appointing an arms-control "Czar" to help resolve East-West tensions.

However optimistic he may sound, the going will not be so easy. The budget deficit for 1985 is \$210b and the President is pledged against tax increases. The Democrats in the House of Representatives are also strong and there is the likelihood that there may be a protracted impasse with Congress over the details of domestic spending. Tip O'Neill and majority leader Jim Wright have just announced their post-election strategy—the Democrats are not going to let "Reagan hide in the basement while we raise taxes. If he wants something, he is going to have to ask for it."

US-USSR

ON TALKING TERMS

Almost exactly one year after the Soviet Union had walked out of the Geneva talks on Euromissiles (INF) in protest against the deployment of Pershing-2 and cruise missiles in West Europe by the NATO allies, Moscow and Washington announced the resumption of the talks. US Secretary of State George Shultz and Soviet Foreign Minister Andrei Gromyko are due to meet in January to discuss issues aimed at achieving an arms balance. Hopes that something like this may happen were aroused when President Reagan had expressed his interest in meeting his counterpart in the Soviet Union, Chernenko, so as "to get down to examining the question of reducing nuclear weapons". Reagan's main interest in expressing such a wish may have been a pre-election stunt to reassure the American public. Chernenko, however, took him at his word and decided to break the log-jam. The Soviet Union took the initiative and gave up its earlier insistence on

the withdrawal of cruise and Pershing-2 missiles from West Europe as a precondition for the resumption of negotiations.

President Reagan's National Security Adviser, Robert McFarlane, recently said that the administration was prepared to negotiate on long-range and intermediate missile controls and was also ready to talk about limiting space weapons. It is possible that the US may appoint a special envoy to take charge of the talks but no decision has yet been taken. The Soviet Union, on the other hand, feels that the US has not really changed its basic policy. Washington has been following a "star wars" policy—that is, to intensify the nuclear arms race to the extent that it becomes ruinous for the Soviet economy. According to the Communist Party newspaper *Pravda*, the main obstacle to agreement between the two countries is that Washington does not intend to give up its "star wars" programme.

Hardliners on both sides will have to be controlled if anything is to come out of the new Geneva talks. And the whole world wants the talks to be constructive: after all, who wants a nuclear holocaust?

USSR

THE HOMECOMING

"Having found myself in the so-called free world, I was not free for one single day." So said Svetlana Alliluyeva, Joseph Stalin's daughter, who re-defected to the Soviet Union 17 years after she had defected to the West through India. She had been allowed to come to India in 1967 with an urn containing the ashes of her Indian husband who had died of a respiratory problem. Once in New Delhi, she had sought asylum in the US Embassy and had later been given American citizenship. She had married an American architect, William L. Peter in 1970, borne him a daughter, divorced him in 1973 and moved to Cambridge, England, in 1982. Recently, however, she had begun to miss her homeland as well as her two children by earlier marriages, whom she had left behind in the Soviet Union.

On her return to Russia with her daughter Olga, she held a press conference in which she said that she had never wanted to become a defector in the first place but had chosen to do so. She added that from the moment she had arrived in the US, she had fallen into the hands of businessmen, lawyers, publishers and intelligence agents who had manipulated her. These people had sought to "turn my name and the name of my father into a sensation" and she had become "a favourite pet" of the CIA, which had dictated "what I should write and how".

Such statements by Alliluyeva are, perhaps, necessary for her rehabilitation in the Soviet Union. While in the West, she had denounced the Soviet regime in many books and interviews. She had called the Bolshevik Revolution a tragedy for Russia and had characterised Stalin as "a moral and spiritual monster". She had also vowed that she would never return to the "prison" of Russia and had virtually burned her Soviet passport. Recently, however, she had become depressed and homesick. She had told interviewers that she regarded both the US and the Soviet Union as equal menaces to world peace and that she felt as though she had moved "from one cage to another".

The propaganda victory of the return of the "prodigal daughter" for the Russians was doubled by the return of two other defectors in November. Igor Rykhov and Oleg Khlan, who had deserted from their military units in Afghanistan and taken shelter in Britain, turned themselves in to the Soviet Embassy in London. It appears that they, too, had become homesick. According to Alliluyeva, there are many defectors now in the West who have been prevented from returning home "only by fear of possible punishment". If this were true, her words and action may encourage many other defectors to re-defect.

In another development, Defence Minister Dmitri Ustinov was conspicuous by his absence from the line-up of Kremlin leaders before the Nov-7 parade. In 1982, Brezhnev had died three days after he made an unsteady appearance before this parade and a year later, Yuri Andropov's absence from this function gave hints of his imminent demise. Ustinov is said to be suffering from a "sore throat", but as Western Kremlinologists say, "colds in the USSR tend to be fatal". There are unconfirmed reports that he has either suffered a stroke or has a serious liver disease. Western analysts feel that his most likely successor is Warsaw Pact Commander Viktor Kulikov, although others feel that the civilian, Grgori Romanov, may also be in the running.

VIOLENCE AGGRAVATES

The crisis in Sri Lanka deepened in late November as Tamil guerillas stepped up their attacks on the Sinhalese. On Nov 21, there were a large number of reports of violence from Colombo and other parts of the country. Thirty policemen, a majority of them Sinhalese, were killed in an attack by Tamil guerillas on Chavakacheri police station in the northern province. Later, four shops owned by Tamils were set ablaze at Timbingsayaya in southern Colombo, where families of some of the victims of Chavakacheri resided.

As the month drew to a close, reports came in that 110 people had been killed in attacks by Tamil separatist guerillas. In simultaneous raids on two separate farms, about 50 civilians had also been killed. About 30 guerillas had also died in the incident. A guerilla organisation called Liberation Tigers of Tamil Eelam (LTTE) claimed responsibility for the attacks. This group is one of about six guerilla groups operating in places situated in rehabilitation centres for former prisoners. About 450 people had settled there in the last four months, and most of them belonged to the Sinhalese community.

The Sri Lanka Government has begun to reinforce its armed forces on a war footing. The National Security Ministry has arranged to recruit permanent personnel and volunteers for the defence forces and, according to reports, on one day alone, 15,000 men had stood in line to get enlisted in the Sri Lankan Air Force.

Meanwhile, the government has again charged that bases for the training of Tamil extremists exist in India. The Sri Lanka Freedom Party (SLFP), which had earlier not joined the government on this issue, reversed its stand. The SLFP leader, Anura Bandumaike, said in an interview that though he differed from CM Premadasa on other matters, "there is no doubt now that such bases do exist". India has denied the charge vehemently.

LIBYA

ON THE RECEIVING END

Libya outmanoeuvred France and Egypt outmanoeuvred Libya. Nov 12 was supposed to be the deadline when France and Libya were to concurrently withdraw their forces from Chad. French and Libyan troops have been locked in an uneasy stalemate in the former French colony of Chad since August 1981. Before the deadline approached, the French foreign minister declared that the French troops had withdrawn. A US satellite revealed that two Libyan battalions were still stationed in Chad and its President announced that the Libyan aggression had not ceased.

President Mitterrand's government was thus caught on the word front, and faced strong criticism from the Christian right-wing for not taking a tougher stand against the Libyan strongman Col Muammar Gaddafi. Mitterrand was interested in protecting France's relations with the area as a whole and had hoped to reduce tensions through negotiations. Libya, however, went back on its words, and this was disclosed, much to Mitterrand's embarrassment, when the President was meeting Gaddafi on the island of Crete for the first Franco-Libyan Summit in 11 years. Gaddafi, at first, denied that there were Libyan troops in Chad, but later said that there was a delay in the withdrawal programme and promised to withdraw "every single soldier" from the area. France, on its part, declared that if the Libyans did not pull out, it would "honour its commitments" and return its troops.

On the other hand, Libya, too, suffered some embarrassment in November when Egypt disclosed that Gaddafi had sent out roving death squads to hunt down enemies. In the second week of November, Tripoli announced that the former Prime Minister, Abdel Hamid Bakkoush, had been "executed" in Cairo for having "sold his conscience to the enemies...of the Libyan people". Five days later, the Egyptian Government produced Bakkoush alive and well. It appears that President Hosni Mubarak had got wind of the plot to kill Bakkoush and had identified four foreign hitmen: two British and two Maltese. They had been arrested and faked pictures of Bakkoush lying in a pool of blood had been printed. Thus, Gaddafi had been tricked into thinking that his plot had succeeded and had made a public announcement. This event confirmed that the Colonel's international murder squads were still active. Mubarak also got confessions from the would be assassins and warned that several world leaders had been marked for assassination, including West Germany's Helmut Kohl and Saudi Arabia's King Fahd. Mubarak had also recently accused Gaddafi of mining the Red Sea and plotting to blow up the Aswan Dam. Gaddafi denied all these charges and called them "imperialistic fabrications".

Besides getting duped, Gaddafi had yet another set-back in November when the Belgians withdrew their earlier offer to help him equip Libya with nuclear reactors. They were, perhaps, influenced by Libya's double-dealing

assurances that the nuclear material would not be diverted for building weapons, his word, it appears, cannot be trusted.

POLAND

MURDER OF A PRIEST

Late in October, the Rev Jerzy Popieluszko, who was a known anti-communist and used the church as his pulpit, was kidnapped. Eleven days later, his body was found in the Woclawek reservoir, 45 miles down the Vistula river. His body was badly bruised and signs of torture were evident. Three Polish security officers were charged with the priest's kidnapping and murder and the government arrested a colonel and lieutenant in the Internal Affairs Ministry in connection with the killing and suspended one general on the grounds that he had not taken "sufficient supervision" of his department's operation. The three security officers subsequently pleaded guilty to the charge and Polish strongman Gen Wojciech Jaruzelski himself assumed charge of the Internal Affairs Ministry.

Few, however, believed that these officers had engineered the murder by themselves. Most Poles think that the plot goes much further. One theory is that the communist hardliners in the security forces had decided to eliminate the anti-communist priest. There is yet another theory which traces the conspiracy back to Moscow, which may want to discredit the Jaruzelski regime. Some Solidarity supporters believe that Jaruzelski himself was behind the murder because, although the government acknowledges the church's calming influence on the public, many priests have openly supported the outlawed Solidarity movement.

What is surprising is that the government is conducting its investigations with an openness which is unprecedented for a communist country. Further, the speed with which the Internal Affairs Ministry is acting is also unprecedented. The ministry has been going through a period of self-purification over the last two years and 2,000 officers have already been dismissed from the security service and the civil militia for various transgressions. However, the government has shown no signs of adopting a conciliatory attitude towards the Opposition which holds the government responsible for the priest's murder.

The timing of the murder has also been awkward for Jaruzelski, coming at a time when the West seemed more inclined to restore normal relations with Poland. As for Popieluszko himself—he has become a hero. Thousands turned up for his burial and long lines of mourners gathered outside his church for days afterwards. Solidarity leader Andrzej Gwardzinski called for an hour's strike at Gdansk, but Lech Walesa was against this, and a revival of a resumption of talks between the Opposition and the government. Jaruzelski declared that "this death must become a building material of social peace."

UK STRIKE

PROMISING PROSPECTS

There are some hopeful signs that the National Union of Mine-workers (NUM) strike, which has proved to be the most disruptive labour unrest in the country since the 1926 General Strike, may end sometime in the near future. The strike, which has been continuing for over one-and-a-half-years, suffered a major setback when it was disclosed recently that the NUM had sought financial assistance from Libya's Muammar Gaddafi. The Marxist leader of the NUM, Arthur Scargill, met Salem Ibrahim, who is known to be one of Gaddafi's main paymasters to European terrorists, in France. Roger Windsor, the Chief Executive of NUM, had also visited Libya. The Libyan link was not widely accepted, even by some of the miners. Norman Willis, the Secretary-General of the Trades Union Congress, Britain's umbrella labour organisation, condemned Scargill's move. The main reason for this lack of support is that earlier this year, Britain had broken off diplomatic relations with Tripoli following the murder of an unarmed policewoman by a gunman inside the Libyan Embassy in Britain.

Later, in November, Scargill also made an appeal for assistance at the Soviet Embassy and according to the Soviet news agency Tass, the Soviet miners have contributed about £50,000 to the NUM. The strike was further weakened when the Mine-safety Supervisors Union decided not to join the miners' strike in late October. Had they joined, all of Britain's 174 coal mines would have had to be shut down. Meanwhile, the Coal Board has been holding out carrots to miners who return to work soon—\$1,764 in wages and back-holiday pay.

The strike has cost 60m tons in lost coal production. The strikers have lost an average of \$7,500 in pay, each. In the violence which has accompanied the strike, 35 policemen and many more miners have been injured and 45 strikers have been arrested. There has been large-scale violence of

...I am not prepared to condemn the action of my members whose only crime is fighting for the right to work." PM Margaret Thatcher, however, remains uncompromising and, perhaps, her strong stand will finally pay dividends.

OAU

ORGANISED DISUNITY

The 20th Summit of the Organisation of African Unity (OAU) began at Addis Ababa in Ethiopia on Nov 12. African unity, for which the organisation was formed was, however, far from achieved, and the major point of contention this time was over the admission of the Saharan Arab Democratic Republic (SADR), which claims, over the objections of Morocco, a member of the OAU, that it controls Western (formerly Spanish) Sahara. Its guerilla arm, the Polisario Front, has, in fact, been fighting Moroccan troops in the area. SADR has Nigeria's backing. But its seating in the OAU would mean that it has the OAU's collective backing.

Morocco has steadily been losing the support of the OAU on the issue and Nigeria's Gen Buhari declared that Nigeria had decided to recognise SADR because of Morocco's failure to hold a referendum on independence in and for the territory and to open direct negotiations with the Polisario Front.

Morocco, therefore, withdrew from the meeting in protest and had withdrawn completely from the OAU. Zaire, too, did not participate in the proceedings of the meeting and 20 of the OAU delegations were not lead by the head of state or government. King Hassan of Morocco signed a treaty of "union" with Libya in August and had perhaps hoped that this would strengthen his hand at Addis Ababa. But Libya's Gaddafi was present at the meeting and his men did nothing to keep the SADR out of OAU.

In fact, the one matter on which there appeared to be total African unity was South Africa and all the nations denounced the "racist regime" there. On other matters, the OAU remains divided and the question, therefore, arises: How long will it survive?

ETHIOPIA

HUNGRY FOR FOOD

Why does it take a 10-minute TV film to awaken public sympathy? So asked Muhammad Amin, the Nairobi-based BBC TV cameraman whose televised coverage of the Ethiopian famine has moved the Western world to send money and supplies at record-breaking rates to the starving country. And it is perhaps too late, for, according to estimates, it is unlikely that more than 20% of those gripped by famine could be reached before they died. At least 3,00,000 people have already died and at least 6m live on the brink of starvation. According to relief workers, over a million could die this year alone in what could become "the worst human disaster in recent history".

The first warnings of the impending disaster were ignored by the Western world and the Ethiopian Government two years ago. Critics of the Reagan Administration charge that Ethiopia's connection with Soviet Russia as a Marxist state, inhibited the American Government in its aid efforts. Earlier this year, the American Congress killed an economic policy initiative that would have provided Africa with \$75m for development in 1985 because it insisted that the money would go only to governments that rejected socialism. As for Ethiopia, the country's leader, Lt Col Mengistu Haile Mariam, was warned of the impending crisis two years ago by a group of Oxford University economists headed by Keith Griffith. He chose to ignore the warning and spent \$2.5b on Soviet arms. He spent another \$250m this year on the 10th anniversary of the Marxist revolution in the country.

Meanwhile, his countrymen died by the thousands every day. The last big African famine had occurred 10 years ago and had led to the death of over 3,00,000 people. It had also led to Emperor Haile Selassie's overthrow. At the time experts had insisted that famines are predictable and some had vowed that the disaster would never happen again. Yet, it has recurred, perhaps in a worse form. The natural disaster is worsened by poverty, environmental damage and rapid population growth. In fact, Africa is the world's poorest area and it is the only region where the population is growing faster than the food supply.

Ethiopia is not the only country affected by starvation. Two vast hells of starvation have spread across the continent and nearly 30 countries have been officially listed as 'hungry'. In the last 20 years, Mauritania has lost more than three-quarters of its grazing land to the encroaching sands of the Sahara, and in some areas, 90% of the livestock is dead. About 2,00,000 people have died in Mozambique. Chad, too, has been suffering from a famine similar to that of Ethiopia. To make matters worse, many other



Pining for food.

countries, for instance, Chad, Angola, Ethiopia and Mozambique, have been embroiled in civil war for years. Other relatively prosperous countries have suffered as a result of an influx of refugees. Sudan, which was once expected to become the bread basket of the Arab world, has been flooded by refugees from Ethiopia and Chad and can now barely feed its own 2.5m people.

The Western response of late has been very heartening but it may have come too late. The US has contributed \$97.5m in food aid to Ethiopia since Oct 1 alone; West Germany has donated \$6m in aid; Italy has promised to build a hospital; and Canada and Australia have contributed tens of thousands of tons of grain. The Soviets, too, have given much in aid and have sent 400 trucks, 16 planes and 24 helicopters to help distribute the food. This, however, is a short-term remedy, even if it helps to save many lives now. The question is: What can be done to ensure long-term self-sufficiency in food?

PAPAL PLOT

TRIAL OF THE CENTURY

What may well prove to be West Europe's trial of the century will begin sometime next year. Another chapter was added to the story of the conspiracy to murder Pope John Paul II in St Peter's Square on May 13, 1981, when the chief investigator, Judge Ilario Martella, filed a 1,243-page final report on the case in early November. While Martella's report will remain secret till the trial begins, 13 pages have been made public and these have shed new light on the case.

After the attempted assassination, it was thought to be the work of a mad Turkish gunman, Mehmet Ali Agca, who was arrested immediately afterwards. But his statements led to the unravelling of an alleged Bulgarian connection and the threads may lead as far as Moscow. The report indicts three Bulgarians, including a Bulgarian airline official Sergei Ivanov Antonov, who is under house arrest, and two other Bulgarian Embassy officials, Todor Aivazov and Maj Zhely Vassilev, who have since left Italy.

Martella's report further claims that a second Turk, Oral Celik, a friend of Agca, fired a shot at Pope along with Agca. Martella is said to have a secret film shot by a Vatican camera crew that lends credence to this theory. There is a photograph of a man running away from the scene of the attempted murder, and this person is thought to be Celik. The Bulgarian helpers are alleged to have planned an escape route for the Turks, and Celik, who is absconding, may perhaps have used their help to escape.

The indictment also charges that a Turkish businessman, Bekir Celeuk, offered \$1.2m to Agca, Celik and another defendant, Musar Cedar Celebi, to kill the Pope. It further accuses another Turk, Omer Bagci, of smuggling in the Browning automatic pistol which Agca used to shoot the Pope. Bagci and Celebi are in jail in Italy and Celeuk is in Bulgaria. Martella's report claims that there are at least five other unidentified people involved in the conspiracy.

The Bulgarian Government has stated that the case is a political conspiracy against Bulgaria and socialism. Relations between Italy and Bulgaria have reached a new low, and early in November, a member of the Italian Parliament reportedly called for an end to diplomatic relations with Bulgaria.

PHILIPPINES KILLING AT RANDOM

The Agrava Commission, which investigated the 1983 murder of Opposition leader Benigno Aquino in Manila airport, put up evidence against Gen Fabian C. Ver, the armed forces Chief of Staff, and 24 other military officials. However, 68 Filipino generals put up an advertisement in a local newspaper pledging "unwavering loyalty and support" to Gen Ver. Only 15 generals did not sign this "manifesto", among them Lt Gen Fidel Ramos, his longtime rival. This showed that the upper rung of the army, at least, were staunch Ver supporters. Ver has, meanwhile, taken leave to prove his innocence, although he has not, as yet, relinquished his key post as head of the National Intelligence and Security Authority.

Even after the Agrava Commission declared that a military conspiracy was behind Aquino's assassination, another Opposition leader, Cesar Giliwaco, the Mayor of Zamboanga City in southern Mindanao, was murdered by an unknown assailant. While some felt that he had been killed by local mobsters, others alleged that the Ferdinand Marcos regime had masterminded it. He was an outspoken critic of the Marcos Government and had vowed not to cut his hair until "peace and democracy are restored". In fact, over the past two months, four other Opposition leaders have been murdered, and it is alleged that the right-wing People's Liberation Army, trained and financed by the Army, is responsible for the death of three of them.

The fury of nature added to the death toll. Last September, two typhoons named Ike and June devastated the islands. In November, typhoon Agnes killed over 500. Since over 700 are still missing, the toll may be as high as 1,200. The few economically-important regions, spared by the earlier typhoons, were affected by the November typhoon. Rebel groups took the opportunity provided by the confusion created by the typhoons, specially in areas where the communication system had broken down. In early November rebels killed 15 soldiers and 11 civilians. There were also a number of serious fires in some Manila hotels. These are said to be the work of urban terrorists. To say the least, Marcos is sitting on a potentially explosive situation. To add to his personal miseries, he has allegedly undergone a surgical operation recently and his physical condition is poor.

SORE CURE



Sore or pulled muscles need not worry you. The new hand-held sonic massager puts you right back into action. Developed over a period of 30 years this instrument produces sonic waves of 100-10,000 Hz that penetrate muscle tissue up to a depth of 6 cm. What's more, the massager can easily be used at home by any layman

THE KOREAS SMILING ON

To Panmunjon they came, seven from the North, seven from the South. According to a veteran Korean watcher, "they usually start out smiling but end up scowling. Today, they kept on smiling."

The occasion was a meeting between delegates from North and South Korea to discuss economic ties between the two countries for the first time since 1945. Earlier, North-South exchanges had ended as damp squibs in May, talks of fielding a joint team for the Olympic Games in Los Angeles ended in a shouting match, and in August Pyongyang pointedly ignored a South Korean offer for technical and economic assistance. A natural calamity intervened, however, in September in the shape of a major flood in the South and set the two back on the tracks. Seoul accepted Pyongyang's offer of \$12m in relief supplies and the scene was set for the November meeting.

China has been pressuring North Korea to renew contacts with the South for a long time. The South, which wishes to expand unofficial and economic relations with Beijing and wants the Olympic Games, which are scheduled to be held in Seoul in 1988, to go off smoothly, decided to put aside its precondition that North Korea should apologise for the bombing in Rangoon last year which killed four South Korean Cabinet ministers and 12 other officials, and decided to meet the North Koreans.

During the talks, each side offered a list of proposed trade exchanges. The South was interested in buying briquette coal, iron ore, pig iron, lead, zinc, silica, scrap, fish, silk, cocoons, red beans, corn, castor beans and material for herbal medicines, and in selling finished steel, copper, aluminium, household goods, automobiles and electronics. The two mutually agreed to open railway links between the two capitals and a telephone "hot line" for trade purposes. They also spoke of opening key points in each country for trade. North Korea has a current foreign loan burden of \$3b and its economy suffers from ageing factories and equipment. It is possible that Seoul is just the first step, and Pyongyang aims at making contacts with the US and Japan for trade purposes and for improving its economy. Whatever the reasons for this North-South thaw, it is a welcome change from their previous hostile attitude. Korean reunification, however, still appears far away.

JAPANESE ELECTION IT'S NAKASONE AGAIN

Yasuhiro Nakasone recently became the first Japanese PM in more than a decade to win a second term as leader of the ruling Liberal Democratic Party (LDP) and with it the primeministership. This is because the party is predominant in the Japanese Diet (Parliament). The victory, however, did not come easily. There are a number of factions in the LDP, the chief among them being led by former PMs Kakuei Tanaka, Takeo Fukuda and Zenko Suzuki. Tanaka, who is now appealing a conviction for accepting a \$2m bribe from the Lockheed Aircraft Corporation of the US, heads the largest faction, controlling 120 of the LDP's 393 Diet members. He is known as the "shogun in darkness". Nakasone has Tanaka's backing and won the leadership struggle with his help.

His potential rivals were Kichi Miyazawa, who belongs to the Suzuki faction, and Shintaro Abe, who belongs to the Fukuda faction. More dangerous for Nakasone, however, was a plot engineered by dissatisfied members of the LDP. They backed a senior Tanaka man, Susumu Nikaido, with the hope that this would split the Tanaka faction's vote. The plot failed either because Nikaido proved to be too loyal or because he was unsure of himself.

The main reason for Nakasone's unpopularity within the LDP is that he is a Tanaka man and Tanaka is alleged to be corrupt. Two years back, Nakasone had pledged to rid the party of bad influences, but he has not cut his connections with Tanaka. In fact, he has become doubly indebted to Tanaka in this election. However, his popularity in the country stands at 58% in the polls, the highest for any Japanese head of government in ten years.

As a result of the compromise which led to his victory, Nakasone tailored key posts along factional lines. Abe was made the foreign minister and Miyazawa, the Chairman of the party's Executive Council. He also appointed Japan's first woman minister in 22 years. However, his critics had a field day when he granted five of the 20 Cabinet portfolios to members of the Tanaka faction.

Given his party problems, Nakasone may have to tone down some of his policies. In the fiscal and military fields, he may have to lessen his austerity moves.

S.B.

GEOGRAPHY HOMEWORK

BY BRIG R.L. MULLICK
(Reid)

It's time to speak geographically again because research reveals that usually 25% of all questions in G.K. in competitive exams like the Civil Services, Assistants' Grade, NDA, CDS, PO, Income-tax Inspectors, Senior Observers and Clerks' Grade are on Geography. So, to increase your knowledge globally, both physically and politically, and to take your score to greater heights, here's an exhaustive feature on Geography in all its latitudes and longitudes.

PHYSICAL

abrasion: Wearing away of part of earth's surface by the action of wind, water or ice; the moving debris, e.g., sand, acts as abrasive material.

afforestation: Planting bare ground with trees and transforming an area into a forest. Afforestation may be undertaken to replace trees cut down or to provide a supply of timber, or to improve the climatic or aesthetic conditions of a place.

altitude: (i) Height or elevation of a place above mean sea level, usually measured in feet or metres. (ii) Angular distance measured vertically, e.g., of a heavenly body, above the horizon.

anemometer: An instrument by which the velocity and direction of wind is measured, usually in miles per hour or metres per second. The commonest type is that in which cups rotating on a pivot record wind velocity on a graduated dial.

Antarctic Circle: The line of latitude at 66° 30' S. Owing to the inclination of the earth's axis, the sun does not set here on one day of the year, around Dec 22, the southern midsummer. Similarly, the sun does not rise on one day around Jun 21, the southern midwinter. The conditions are the converse of these at the **Arctic Circle** (latitude 66° 30' N) where the northern midsummer is around Jun 21, and the northern midwinter around Dec 22.

antipodes: When two places on the earth's surface are diametrically opposite to one another, i.e., situated at the ends of a diameter, each is said to be the antipodes of the other, e.g., North Pole and South Pole. The antipodes of a place 60°S and 50°W is a place 60°N and 130°E. At the antipodes, both the seasons and day and night are reversed. Winter at one is simultaneous with summer at the other, and noon at one is simultaneous with midnight at the other.

aphelion: The position of the earth in its orbit when it is at its greatest distance from the sun, i.e., about 3m miles further away than when it is at 'perihelion'. It reaches this position during summer in the Northern Hemisphere when it receives the direct rays of the sun and the days are of the maximum length.

archipelago: A group of islands. The name was first given by the Greeks to the islands in the Aegean Sea—Aegean Archipelago. It was afterwards used for any group of islands. Archipelagos are most common in the southern part of

the Pacific Ocean.

artesian well: When a basin-shaped permeable layer of rock, such as chalk, is sandwiched between two impermeable layers, such as clay, and is exposed at both ends, rain water percolates through these ends and fills the whole of the permeable layer which becomes saturated to the rim of the basin. If a hole is drilled through the impermeable rock reaching as far as the bottom of the permeable rock, water gushes out of the hole as a result of hydrostatic pressure. A well sunk at this place is called an artesian well. The name is derived from Artois the French province where some of the earliest artesian wells were constructed. Such wells are common in Australia and Algeria. In India, artesian wells are found in the Hoshiarpur district of Punjab and the Kangra district of Himachal Pradesh.

atmospheric pressure: The pressure of a point due to weight of column of air above that point. At the earth's surface (sea level) the pressure equals about 14.7 lbs per sq inch or 1,038 gm per sq cm. With increasing height above the surface, the pressure decreases.

atoll: A coral reef in the shape of a ring or horseshoe enclosing a lagoon. They are found in the Indian and Pacific oceans and are usually grown over with coconut palms.

avalanche: A vast mass of snow and ice at high altitude which has accumulated to such an extent that its own weight causes it to slide rapidly down the mountain slope, carrying with it thousands of tons of rock. Avalanches are a common occurrence in the Himalayas and many a mountaineering expedition has been wrecked by these moving glaciers.

barometer: Instrument for measuring atmospheric pressure. In its simplest form known as the Mercury Barometer, it consists of a glass tube closed at the upper end and filled with mercury. The lower end is plunged in a tank of mercury, this column of mercury is balanced against the weight of atmosphere. Another type of barometer is the Aneroid Barometer which consists of a metallic box, partially exhausted of air, its surface reacting to outside air pressure which is registered on a graduated dial face.

basalt: A dark grey or black fine-grained igneous rock formed by the solidification of lava.

basin: An extensive hollow or trough in the earth's crust. If occupied by an ocean or a lake it is termed as an ocean basin; if coal deposits are present, it is called a coal basin, the total area drained by a river and its tributaries is a river basin.

bay: Part of the sea, or of a large lake

enclosed by a wide curve of the shore, e.g., Bay of Bengal, Bay of Biscay.

biosphere: Both animate and inanimate life on earth which includes human beings, animals, birds and plants.

block mountain or horst: A mountain mass formed by the uplift of land between faults or by the sinking of land outside the faults.

bore or eagre: A tidal wave or great height and force which appears in the estuaries of certain rivers at times of high or spring tides. There is a conflict between the river and the tidal wave, resulting in a high wall of water moving up the river. The bore is experienced in rivers like the Hooghly in Bengal, Yangtse Kiang in China and the Trent in England.

bund: An artificial embankment, dyke or dam.

Buys Ballot's Law: The law, enunciated by Buys Ballot in 1857, which states that in the Northern Hemisphere the winds move anti-clockwise round centres of low pressure, and clockwise round centres of high pressure, the reverse being true, again for the Southern Hemisphere.

campos: The tropical grasslands or Savanna of Brazil, situated north of the equatorial forests of the Amazon Basin.

canyon: A deep ravine or narrow valley made by a river cutting its way through a rock. The most famous canyon in the world is the Grand Canyon of Colorado River in Arizona. It is about 352 km (220 miles) long and 16 km (10 miles) wide with walls 1,830 m (6,000 ft) high.

cape: The extreme end of land that juts out into the sea, e.g., Cape Comorin in the south Indian peninsula.

cataract: A large waterfall or series of waterfalls.

catchment basin or drainage area: The region which drains all the rain water that falls on it into a river or stream which then carries the water into the sea or to a lake.

Centigrade or Celsius Scale: The temperature scale used over most of the world including India. It is the simplest scale devised with two fixed points: the freezing and the boiling point of water, being 0° and 100° respectively. To convert temperature on this scale to one on the Fahrenheit Scale, multiply it by 1.8 and add 32 to the result. $F = (1.8 \times C) + 32$.

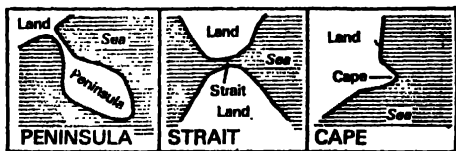
Chinook: A warm, dry west wind blowing down the eastern slope of the Rocky Mountains in Canada and the US. The Chinook warms the atmospheric temperature very quickly by as much as 15°C to 20°C in a couple of hours, melting the

...and making greatly possible almost throughout the winter.

climate: Climate is a composite and average picture of weather conditions prevailing in a region over a long period, usually 30 to 35 years.

climatic regions: The main areas into which the earth is divided according to climate. The four principal climatic regions which are usually recognised are tropical, sub-tropical, temperate and polar.

cloud: Mass of watery particles suspended in the air which are formed by the condensation of water vapour in the atmosphere, usually at a considerable height above the earth's surface, water vapour is created by evaporation of surface water—oceans, lakes, rivers, etc. According to their shape and mode of formation, two main types of clouds are recognised—cumuliform or 'heap' clouds and stratiform or 'layer' clouds.



cloudburst: A phenomenon in which a huge mass of moisture-carrying clouds bursts into a heavy downpour on account of condensation of all water vapour at the same time. Cloudbursts, though possible anywhere, are more frequent in mountain districts, as in Kashmir.

col: A depression in a mountain chain connecting two or more mountains. Such depression is useful in mountaineering for establishing camps, e.g., South Col in the Everest area. Passes are formed across such depressions, also called saddles or necks.

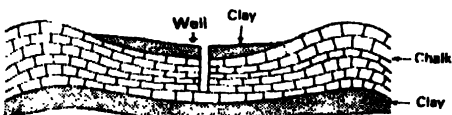
confluence: The merging of two or more rivers or streams, as of the Ganges, the Yamuna and Saraswati at Allahabad.

coniferous forest: A forest of mainly ever-green coniferous or cone-bearing trees carrying needle-shaped leaves, e.g., pine, fir and spruce.

constellation: A group of fixed stars in the heavens. There are now 28 northern, 12 zodiacal and 48 southern recognised constellations, the best known amongst them being the Great Bear, the Orion and Ursa Major.

continental climate: The type of climate experienced in the interior of the great continents characterised by extremes of temperature, light rainfall and low humidity.

A B C D



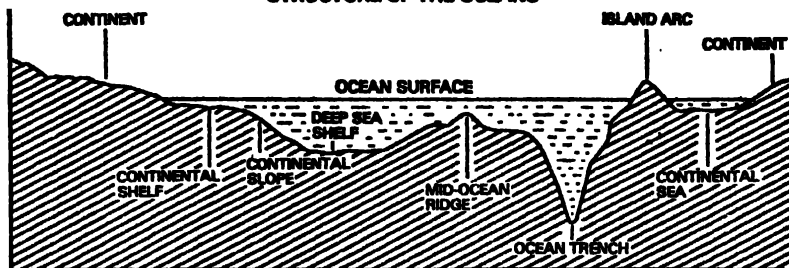
Artesian well

Continental Drift: German scientist, Alfred Wegener, advocated in 1915 the theory of Continental Drift. According to this theory, there was only one continent and one ocean about 250m years ago. Wegener named this continent Pangaea (meaning all lands) and the ocean Panthalassa (meaning universal ocean). The land mass then separated and started drifting until it was divided into the present continents. The continents have been constantly on the move throughout geological history and are still shifting. The configuration of the continents, it is held

by geologists, will be completely different in another 50m years.

NIFE stands for nickel (Ni) and iron (Fe). Temperature at the centre of the earth is very high but the

STRUCTURE OF THE OCEANS



continental shelf: A shallow area surrounding the land masses and never more than 600 ft (100 fathoms) deep. The boundary of the continental shelf, which slopes gently towards the sea, is known as the continental edge. The shallow seas are good breeding ground for fish. Tides, useful for commerce, are also quite high in such areas. Along the eastern coast of India, there exists a fairly wide strip of continental shelf.

contours: A line drawn on a map to join all places at the same height above sea level; a number of contours, therefore, depict on a flat map the relief of the land over the area covered.

convective rainfall: Convection is the form of heat transmitted from one part of a liquid or gas to another by movement of the particles themselves. The hotter part rises to the surface and its place is taken by the cooler part. Similarly, due to the heat in the equatorial region, evaporation is very great and the warm moist air rises in a convection current upwards. In the upper regions of the atmosphere, water vapours condense, form thick clouds and bring heavy rains. Such rains are called convective rains.

coral islands and coral reefs: Coral polyp, part plant, part animal (consisting of a jelly-like mass around a hard skeleton which remains after the softer part has worn away), grows sometimes in such great masses as to form islands or reefs. Such coral islands are found in the Pacific Ocean, e.g., the Lau group of islands, the Indian Ocean (Laccadive and Maldiva islands) and the Atlantic Ocean (islands around the West Indies).

core or nife: The central part of the innermost layer of the earth consisting mostly of nickel-iron;

core is not liquid because the great pressure existing there raises the melting point of the rock.

coriolis force: The force due to earth's rotation on its axis which together with the force due to pressure gradient causes the wind to deflect, in accordance with Buys Ballot's Law.

cyclone: A region of low atmospheric pressure of which there are two types. The first, characteristic of temperate latitudes, is now usually referred to as a depression; the second typical of the tropics is usually called Tropical Cyclone. In both types, their winds in the Northern Hemisphere circulate in an anti-clockwise direction, and in the Southern Hemisphere in a clockwise direction.

cyclonic rain: Rain associated with the passage of a cyclone or depression and caused by a warm, moist air mass moving upwards over colder, heavier air.

deciduous forest: Forests of Monsoon and Cool Temperate regions. The trees in these forests lose their leaves at some season of the year. In order to protect themselves against excessive loss of moisture by evaporation, the monsoon forest trees, such as those of India and Burma, shed their leaves during the hot season. In the cooler regions of North-western Europe, the trees shed their leaves during autumn to protect themselves against the cold and frost of winter.

Rhine-Meuse Delta: The low flat sandy islands are dissected by numerous small creeks.



The deciduous forests yield a wide variety of hard and soft woods such as teak from the monsoon forest, and oak, elm and birch from the temperate forests.

delta: In its lower part, just before it falls in the sea, the river becomes extremely slow and the mud and soil that are held in suspension sink at the bottom. This earth continues to pile up till it forces the river to divert its flow and fall into the sea by a number of small channels. The triangular land formation between the extreme channels is called delta and resembles the Greek letter Δ . The well known deltas include the Nile, Mississippi, Hwang Ho, Ganga-Brahmaputra, the Rhine and Rhone. The soil of deltas is usually very rich.

density of population: Average number of people living within a specified unit of area; usually the square kilometre or the square mile in a certain area.

denudation: General wearing away of earth's surface by various natural agents: sun, wind, rain, frost, running water, moving ice and the sea. The heat of the sun causes the rock to expand, crack and break up; the wind carries loose particles and with sand helps to wear away rocks; the rain loosens and carries away the soil; frost freezes water in the cracks of the rock, causes the cracks to widen and the rock to break; solvent water of rivers and streams denude the land; moving ice in the form of glaciers also wears away the land; the sea along the coast also erodes the rocks. The process is also known as degradation. Denudation is one of the two major processes of the earth's sculpture, the other being deposition, also known as aggradation which means filling up the depressions or levelling up the surface of the earth.

dew: Water formed by condensation of atmospheric water vapour as the air cools. Dew point is the temperature at which condensation begins.

doldrums: Also known as the Equatorial Belt of Calms, it is a belt of low pressure in the equatorial regions where the North-Eastern and South-Eastern Trade Winds meet. The belt is characterised by low pressure, high variable winds, stormy weather and heavy rains.

dolomite: Magnesium limestone; it is composed of carbonate of lime and carbonate of magnesium in almost equal proportions. Brittle and lustrous, it is used in the production of steel and for building purposes.



dune: A sandhill formed either in a desert or along the sea coast by the agency of wind. The sand particles are carried along by the wind and piled into a heap which gradually increases in size till it becomes a mound or a ridge.

dyke or dike: 1. An inclined sheet of igneous rock formed when molten rock material from the interior of the earth has forced its way towards the surface through a crack, and has then cooled and solidified. 2. Embankment erected on a river bank or on the seashore to prevent the flooding of adjacent land.

earthquake: A movement or tremor of the earth's crust. Earthquakes are of two kinds: volcanic and tectonic. Volcanic earthquakes are caused by the eruption of volcanoes. On land,



Melford Sound, New Zealand — a fiord. It is a long narrow inlet of sea, with steep sides, scooped out by glaciers.

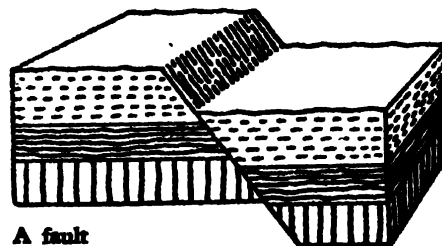
they are localised around the volcanoes and therefore, do not cause extensive damage; but in the sea, these earthquakes can give rise to tidal waves and cause widespread destruction. Tectonic earthquakes are caused by shifts in the rock structure of the earth due to the existence of a fault. When an earthquake strikes, tremors spread outwards in the form of seismic waves. The place of origin, called the epicentre, is the point on the earth's surface which is vertically above the point of origin or seismic focus of an earthquake. The magnitude of an earthquake is measured on the Richter Scale. Earthquakes upto 6 on the Richter Scale are considered to be mild affairs; between 6 and 8, they can be disastrous; beyond 8, they bring about total destruction wherever they strike.

entrepot: A place which acts as an intermediary centre for trade between foreign countries. It is a place where goods are temporarily stored. Two well-known examples of sea ports in entrepot trade are Singapore and Hong Kong.

erosion: The wearing away of the land surface by various natural agents of change. Some geographers regard erosion as synonymous with denudation.

estuary: Usually the funnel-shaped mouth of a river caused by the sinking of a lower part of the river valley in which effects of the tides may be observed.

extrusive rock: Igneous rock formed by solidification of volcanic lava or magma.



A fault

fault or faulting: A fracture in the earth's crust

where movement has taken place and a displacement of the rock strata has been caused, the strata on one side of the fracture lies at a lower level as compared to the corresponding strata on the other side. Faulting may give rise to well-marked relief features like rift valleys and horsts.

fauna: The animal life of a region corresponding to the term **flora** for plant life.

Ferrel's Law: The law which states that winds tend to be deflected owing to the earth's rotation to the right in the Northern Hemisphere and to the left in the Southern Hemisphere.

fog: Atmospheric condition of low-lying cloud or thick mist. When the temperature falls suddenly below dew point, a film of water is deposited in the dust particles present in the air. This is called fog. Visibility in a fog is reduced to one kilometre. If light, the fog is usually called mist.

Föhn Wind: Dry, warm wind, experienced in the northern Alps, which blows down the mountain valleys. Its warmth is due to pressure and consequent rise in temperature as it descends from high altitudes. The warm wind melts the snow and greatly helps agriculture. Similar winds are the Chinook, the Nor' wester (New Zealand) and the Samoon (Iran).

fold mountains: Due to squeezing of the cooling earth, the intense pressure caused the crust to crumple up. This made huge wrinkles or folds upon its surface on land as well as on the ocean floor. This gave rise to fold mountains. Almost all the prominent mountain ranges of the present day come under the category of fold mountains, viz., the Himalayas, the Alps, the Rockies and the Andes.

fossils: The remains of a plant or an animal which has been buried and preserved over a long period in the rocks of the earth's crust. Fossilisation is usually confined to skeleton or hard parts; but entire mammals of pre-historic age have been found frozen in ice.

free port: A port (both sea and airport) at which goods, either imports or exports, may be loaded and unloaded without payment of customs duty.

frost: The particles of frozen moisture or ice crystals on exposed objects or near the ground when the air temperature falls at or below freezing point (0°C).

geographical inertia: The tendency of a place or region to retain an economic activity after original causes of that activity have ceased or changed.

geographical meridian: A measure of height equal to one-sixtieth (1/60th) of a degree or one minute (1) of latitude.

geoid: A term used to signify the shape of the earth which simply means 'earth-shaped'.

geophysics: The study of the physical processes relating to the structure of the earth; including not only the lithosphere, but also the hydrosphere and the atmosphere.

geyser: A hot spring characterised by violent and explosive eruptions of steam and boiling water; sometimes the jet of water rises to a height of 30 to 60 m (100-200 ft). It occurs in a volcanic region. The best known geysers are those of New Zealand, Iceland and Yellowstone National Park of the US.

glacier: Slowly moving ice mass; formed from accumulated snow. The lower layers of the snow mass, accumulated in the snowline region, harden up as ice which under pressure of its own weight, starts moving down slowly carving a broad and steep-side valley on its way.

gorge: The narrow passage that a river cuts out through the hills by means of systematic erosion.

grasslands: Regions of light rainfall where the natural vegetation consists of grass. Two main sub-divisions are recognised—the Tropical Grasslands or Savanna and the Temperate Grasslands which include the Steppes, Prairies and Pampas.

Great Circle: The equator is a great circle as its centre coincides with that of the earth. Every parallel other than the equator is a small circle because its plane does not pass through the centre of the earth. The Great Circle bisects the world into two hemispheres.

gulf: An extensive inlet of the sea penetrating far into the land. The Persian Gulf in West Asia and the Gulf of Mexico in Central America are well-known examples.

harbour: A stretch of water on the coast which affords shelter to sea-going vessels; it may have been formed naturally, e.g., Bombay, New York, Sydney, or artificially, e.g., Dover and Southampton.

heat wave: A term commonly used to signify an unbroken spell of abnormally hot weather.

hinterland: An area behind the sea port which supplies the bulk of the exports and where the bulk of the imports of that sea port are distributed. For example, the hinterland of Bombay port includes Maharashtra, Gujarat and Madhya Pradesh; Cochin's hinterland includes Kerala, Karnataka, Andhra Pradesh and Tamil Nadu.

horizon: The boundary of the part of the earth, seen from any given point; the line where earth (or sea) and sky seem to meet.

Horse Latitudes: Belts of high atmospheric pressure over the oceans, situated in both the hemispheres between the Trade Winds and the Westerlies. They are regions of calm, light and dry winds, and stable weather conditions.

humidity: The degree to which water vapour is present in the atmosphere. The actual amount of water vapour present in the air is its absolute humidity, but where the humidity is measured in terms of saturation, it becomes relative humidity, which is measured in percentage.

humus: Organic matter in the soil derived from the decomposition of animals and plants. Black in colour, it plays an important part in maintaining the fertility of the soil.

hurricane: Cyclonic storms of the West Indies and the Gulf of Mexico, originating in the east of the islands in the Doldrums. The velocity in a



Loch Einich -- a typical glaciated region.

hurricane invariably reaches 120 km (75 miles) per hour and causes extensive destruction.

Ice Age: A geographical period in which ice sheets or glaciers covered large areas of the continents, reaching the sea in places and lowering the temperature of the oceans. There are indications that man was contemporary with the latter part of the ice Age.

iceberg: Mass of ice which has become detached from the ends of great glaciers in the polar regions. They often project 60 m or more above the surface, and are sometimes several hundred metres long. Only about one-tenth of the mass of an iceberg is visible above the water, so that the depth of a berg below the surface is far greater than its height above the surface.

icefall: The part of a glacier where the sudden change of slope has caused crevasses and broken the ice surface into pillars of ice. An outstanding example is the great Khumbu icefall, below the Everest.

igloo: A dome-like dwelling built by the Eskimos in the Tundra region, made from frozen ice.

impervious rocks: Rocks which do not allow water to pass through them freely. Granite provides an example.

insolation: Heat energy received from the sun by the earth and other planets. The amount of insolation reaching any place during any one day depends on: (a) the area of the surface, (b) the inclination of the sun's rays, (c) the transparency of the atmosphere and (d) the position of the earth in its orbit. Insolation is the most important factor controlling the climate.

insular climate: The type of climate where the sea rather than a land mass is the dominant influencing factor. Experienced on islands and coastal regions. The climate is characterised by a relatively small range of temperature (see continental climate).

intensive cultivation: A system of farming where land is continually kept under cultivation

without being allowed to lie fallow any time, farming is so intensive that two, three and even four crops are harvested in a year. Intensive cultivation is practised in countries where land is relatively valuable, as in Denmark or England, or where a rapidly growing population necessitates great intensity in the tillage of land as in monsoon Asia.

isobar: Lines shown on weather maps connecting points where the atmospheric pressure is the same at a stated time.

isobath: A line on a map joining points on the sea-bed with equal depth.

isohel: A line on a map joining places having equal duration of sunshine.

isohyet: A line on a map joining places having equal depth of rainfall over a certain period.

isoneph: A line on a map joining places having equal average cloudiness over a certain period.

isotasy: The state of balance or equilibrium that is said to exist between the highlands and lowlands of the earth due to difference in the densities of their respective rock materials.

isotherm: A line on a map joining places of the same average temperature.

isthmus: A narrow strip of land joining two large land areas, e.g., two continental land masses; or joining a peninsula to the mainland, e.g., the Isthmus of Panama and the Isthmus of Suez.

Japan Current (or Kuro Siwo): A warm Pacific current that flows northwards to Japan and eastwards to the coasts of North America. The current resembles the Gulf Stream in its course and effect.

jet stream: Winds thousands of miles long, more than 100 miles wide, and a few miles deep with a minimum speed of 100 ft per second. Jet streams originate when the polar and tropical air systems meet, their differing temperatures producing corresponding pressure changes which set the jets in motion. Jet streams are the overall regulators of weather conditions on earth.

Khamsin: The hot dry wind experienced in Egypt corresponding to Sirocco of North Africa. Khamsin is the Arabic word for 50; the wind is said to blow during a period of 50 days from April to June.

lagoon: Artificial lake at the mouth of a river,

inlets and bays. Other regions may also be formed by the development of sand bars across the inlets by sea waves as in the Bay of Bengal.

lake: Expanse of water occupying a depression on the land surface of the earth. They may form in rock basins or be caused by an obstruction such as ice or moraine accumulated in a river valley. A lake may be as big as the Caspian Sea or as small as a pond. Lakes may be very deep as Lake Baikal in Siberia having a depth of 1.5 km or extremely shallow as Lake Chad. Lakes which have an outlet and are drained by rivers are freshwater lakes while those which have no outlet become brackish or saltish (See table on page 38).

land breeze: Winds blowing from the land out to the sea caused by the differential in the cooling of land and the sea; during the night, the greater cooling of the land causes the air to descend and flow seawards. This is land breeze (see sea breeze).

laterite: A reddish rock material (clay) produced by weathering chiefly in humid tropical regions; it contains oxides of iron and aluminium. It is found in India, Malaya, Indonesia, Sudan and part of South America. Used locally for making mortar, cement, tiles, etc.

lava: Molten rock or magma which has flowed from the interior of the earth on to its surface through the crater of a volcano and/or a fissure and allows its dissolved gases into the atmosphere.

leeward: The side or direction which is sheltered from the wind, e.g., by a range of mountains. Rainfall is scanty on the leeward side as compared to the windward side. Tibet lies on the leeward side of the Himalayas whereas the Indo-Gangetic Plain lies on the windward side.

limestone: General form of rocks whose chief constituent is carbonate of lime. When pure, a limestone is white, but the presence of iron and other impurities give rise to red, brown, green, blue and other colours, e.g., limestone, chalk, dolomite and marble.

lithosphere: The rigid part of the earth's crust extending to a depth of 65 km (40 miles) below the surface, and comprising the Sial, the Sima and the upper Mantle.

littoral: The land adjacent to the coast of a country. Littoral region of the ocean comprises the shallow water adjacent to the sea coast and littoral countries are countries around that region.

Llanos: The vast tropical grasslands or Savanna, north of the equatorial forests of the Amazon Basin.

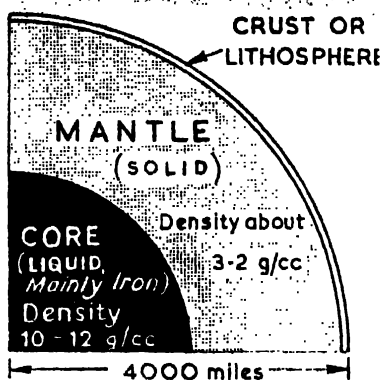
loam: A rich soil consisting of sand, clay together with silt and humus.

local time: Time calculated by the position of the sun at noon of a given place. The places lying on the same meridian, irrespective of their distance, have the same local time.

lowland: The low-lying land of a region in contrast with a mountainous area.

lunar month: The interval of time in which the moon makes one complete revolution round the earth from new moon to new moon; approximately 29.5 days.

magma: The molten material which exists below the solid rock of the earth's crust and sometimes reveals itself on its emission from a volcano; it may also cool and solidify while forcing its way upwards.



crust or lithosphere; it extends downwards to about 2,900 km (1,800 miles) below the earth's surface, under the mantle is the core.

map scale: The ratio between the distance between two points on a map and the actual distance it represents. It may be expressed by the two lengths, e.g., one inch to one mile; the map scale may also be expressed as an arithmetic ratio or fraction known as the Representative Fraction (RF) i.e., most maps are drawn on a scale of a 1/4-inch, 1/2-inch, 1-inch or 6 inches to 1 mile. As there are 63,360 inches in 1 mile, a map on which 1 inch represents 1 mile on the ground is said to be drawn to a scale of 1:63,360.

marsh: A tract of soft, wet land usually low lying and completely under water. The term is synonymous with swamp.

mean sea level or MSL: The average level of the sea; it is the standard level from which all heights are calculated.

Mediterranean climate: The type of climate experienced by the land bordering the Mediterranean Sea and also by other regions in both hemispheres situated in a similar geographical position. The characteristics of the climate are the warmth of summer, the mildness of winter and ample sunshine. Dominated by the Westerlies in winter and the Trade Winds in summer, moderate rainfall is received mainly during the winter, the summer being relatively dry. The vegetation is specially adapted to withstand the summer drought. Fruits like grapes, olives, oranges, lemons and grapefruit are in abundance. Besides the land around the Mediterranean Sea, other areas enjoying this type of climate are central Africa, central Chile, the southern tip of South Africa, and parts of southern Australia.

meridian: Meridians are imaginary lines drawn on the earth's surface joining the North and South Poles and cutting the equator at right angles. The meridian that passes through Greenwich in London has been internationally accepted as zero (0°) meridian or Prime Meridian; other meridians are measured east and west of the Prime Meridian to 180°.

meteor or shooting star: Small, solid body flying around in outer space. Meteors usually occur in swarms which on entering the earth's atmosphere at great velocity become incandescent and visible as shooting stars. Most of them are very small and disintegrate to such an extent during their passage through the atmosphere that they fall to the surface as dust. Occasionally, however, a larger body, known as meteorite, survives the journey and falls to the ground.

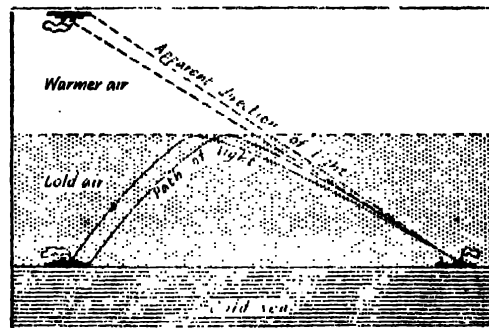
meteorite: A large mass of rock or mineral similar to meteor, but so large that it does not dis-

integrate on the earth's surface. Meteorites vary in size from small grains to large masses found in Greenland and South Africa, weighing from 60 to 70 tons or more. Some meteorites are almost wholly metallic; consisting chiefly of iron-nickel alloy, others contain silicates. One of the best known meteorites is the one which fell near Winslow, Arizona USA, probably about 50,000 years ago and formed a basin over a kilometre in diameter and about 180 m deep.

Meteorology: The science which investigates the atmosphere including the study of atmospheric pressure, temperature, winds, precipitation, cloudiness, sunshine, etc. On the basis of this knowledge, weather forecasts are made.

midnight sun: Term applied to the condition within the Arctic and the Antarctic circles of earth where the sun is visible during the whole 24 hours in midsummer. Due to the obliquity of the earth's axis, the pole which is inclined towards the sun enjoys a six-month day while the opposite pole remains in darkness for this period. At North Cape, Norway, just north of 73° N Latitude, for instance, a part of the sun's disc is continuously visible, day and night, from May 12 to Jul 29.

mineral: A natural inorganic substance which possesses a definite chemical composition (normally a rock does not) and definite physical and chemical properties.



mirage: Word used for optical phenomenon that arises from the reflection and refraction of light in unusual circumstances. Mirages are chiefly seen at sea or in deserts where there is calm air that is extremely hot or extremely cold.

mist: Due to condensation of water vapours in the air, mist appears in the lower layers of the atmosphere which reduces visibility. The phenomenon is called mist when visibility is less than 2,000 m and exceeds 1,000 m, but becomes fog when the visibility falls below the latter limit.

mistral: A cold northerly wind experienced on the shores of N.W. Mediterranean, especially the Rhone delta in France. The wind is strong (velocity may exceed over 130 km per hour), cold and dry and frequently brings down temperature to freezing point.

moon: The natural satellite of the earth, the only heavenly body which revolves round the earth. Moon has a diameter of 3,475 km (2,660 miles), a quarter of earth's diameter. As moon's period of rotation (day formation) on its axis and revolution (year formation) around the sun are equal, the same side of the moon always faces the earth.

moon, phases of: The various stages or changes of appearance through which the moon passes during its revolution round the earth, when

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Example: the Narmada Rift Valley in Madhya Pradesh.

rivers: Popular resorts and beaches on the coastal land of the Mediterranean in southern Europe, e.g., the Italian Riviera, French Riviera Portuguese Riviera and Cornish Riviera.

Rearing Forties: See under Westerlies.

salinity: The degree of saltiness, expressed as the number of parts per thousand of the oceans and seas, lakes and rivers. The mean salinity of sea water, for instance, is 35 per 1 000. The degree of salinity depends on the amount of rain-fall, the loss of water by evaporation and inflow of river water to seas and lakes.

satellite town: Name given to a town which is associated with a large city though it is separated from the latter.

Savanna: The region lying between the equatorial forests and the hot deserts in both the hemispheres where the prevailing type of vegetation is grass (elephant grass is the most common) and scattered trees. Savannas are also called Tropical Grasslands, the most extensive Savanna land is in Africa (Sudan, Kenya, Angola, Rhodesia, etc.). The Llanos in Venezuela and Campos in Brazil are other examples of Savanna lands.

scrub: Term used for tracts of low-growing shrubs or stunted trees in areas which have insufficient rain and poor soil, as in the hot deserts.

sea breeze: The daily movement of air from the sea to the land caused by the difference in the heating of land and sea. During the day greater heat of the land causes the air to ascend and the heavy cooler air from the sea moves in to take its place. This is sea breeze (see land breeze).

sea level: The level at the surface of the sea not influenced by tides or waves (see coast, sea level).

seismograph: Instrument used for detecting and registering vibrations of the earth's crust and especially those of earthquakes. The vibrations used to be recorded by a pen tracing on a revolving drum but in more modern instruments a photographic record is obtained on a moving film.

selvas: Dense tropical forests in the equatorial region of the Amazon Basin.

ship canal: A canal constructed to connect two usual depth and width between two seas or a function is to shorten the voyage. The best known ship canals are (i) **Suez Canal** connecting the Atlantic Ocean through the Mediterranean Sea and the Red Sea with the Indian Ocean. It has shortened the distance between Southampton in England to Bombay by about 1 600 km (1 000 miles); it is about 160 km (100 miles) long, 21 m (70 ft) wide and has a depth of 13 m (42 ft). (ii) **Panama Canal** connecting the Atlantic and Pacific oceans. It is about 64 km (40 miles) long, 33 m deep water in the Caribbean to deep water in the Pacific, between 91 m (300 ft) to 30 m (100 ft) wide, with a minimum depth of 13 m (42 ft). Panama Canal has considerably shortened the distance between London and San Francisco, New York and Japan. (iii) **Kiel Canal** which connects the North Sea and the Baltic Sea. It is 18 km (6 ft) long with a depth of 13 m (42 ft). The canal shortens the distance between London and Baltic ports by about 400 km (250 miles).

sial and sima: Sial is the outer layer of the comparatively light rock of the lithosphere, including granite, lying beneath the continents.

(Continued on page 34)

WORLD

CONTINENTS

Name	Area in million sq km	Percentage of earth's area	Estimated population in million	Highest point in metres	Lowest point in metres
Asia	43.7	29.5	231.6	Everest 8,848	Dead Sea 395
Africa	30.0	20.0	40.0	Kilimanjaro 5,895	Lake Assai 156
North America	23.0	17.4	34.3	McKinley 6,200	Death Valley 86
South America	18.4	11.8	22.0	Aconcagua 6,958	Valdes Peninsula 39
Europe	10.0	6.5	66.0	Elbrus 5,642	Caspian Sea 28
Australia*	7.7	5.2	14.0	Kosciusko 2,230	Lake Eyre 15
Antarctica	14.3	9.6		Vinson Massif 5,140	...

*Australia, along with New Zealand, Tasmania, New Guinea and the Pacific island, (Micronesian, Melanesian and Polynesian islands), is called Australasia by some geographers and Oceania by others.

COUNTRIES

(With a population of over 1m
1m = 10 lakhs; 10m = 1 crore)

AFRICA

Country	Capital	Population	Language	Currency
Algeria	Algiers	21m (1982)	Arabic & French	Dinar
Angola	(Sao Paulo de) Luanda	7.08m (1982)	Portuguese (official) & Bantu	Kwanza
Benin	Porto Novo	3.72m (1982)	French (official) & Fon Yoruba	CFA Franc
Burundi	Bujumbura	4.38m (1979)	French, Kirundi & Swahili	Franc
Cameroon	Yaounde	8.85m (1982)	French & English	CFA Franc
Central African Republic	Bangui	2.48m (1982)	French & Sangho	CFA Franc
Chad	N'Djamena	4.75m (1982)	French (official) & Turku-Sara	CFA Franc
Congo	Brazzaville	1.63m (1982)	French (official), Lingala & Monokutba	CFA Franc
Egypt	Cairo	44m (1982)	Arabic	Egyptian Pound
Ethiopia	Addis Ababa	32.4m (1982)	Amharic (official), Tigrinya, Tigre & English	Birr
Gabon	Libreville	1.23m (1981)	French & Bantu	CFA Franc
Ghana	Accra	11.31m (1980)	English & 8 national languages	Cedi
Guinea	Conakry	5.28m (1982)	French (official) & 8 national languages	Syll
Ivory Coast	Abidjan	8.92m (1982)	French (official), Kanga & Agni	CFA Franc
Kenya	Nairobi	15.8m (1980)	Swahili & English	Shilling
Lesotho	Maseru	1.3m (1980)	English & Lesotho	Loti (plural Maloti)
Liberia	Monrovia	1.9m (1981)	English (official), Pidgin, Vai, Manduro	Dollar
Libya	Tripoli & Benghazi	3.5m (1982)	Arabic	Dinar

dark side faces the earth and no moon is visible. The period is called the New Moon; for immediately afterwards a new moon begins to appear. At the time the moon has advanced through one-quarter of the orbit, one-half of the illuminated surface is visible to us and this is the quarter. After another eighth of an orbit, three-quarters of the illuminated surface is visible to us; then, when the moon has advanced through one-half of the orbit, the entire illuminated surface is visible to us; this is the full moon. The moon has a period of about 29 days between the phases of the moon, and this is known as the lunar month. The phases of the moon are caused by the fact that the moon is illuminated by the sun, and the part of the moon which is illuminated by the sun is visible to us from the earth.

moraine: A deposit of glacial material, usually the material which has been carried by the glacier, and which is deposited when the glacier melts. It may be a single deposit, or it may be a series of deposits, each representing a different stage in the retreat of the glacier.

natural region: A region which is defined by natural features, such as mountains, rivers, and climate, and which is usually of a large area.

warm ocean currents carry a great deal of water vapour giving generally a heavy rainfall over the coasts where warm currents flow and scanty rainfall where cold currents flow. In western Europe, there is heavy rainfall on account of the warm North Atlantic Drift. In South West Africa rainfall is scanty partly on account of the cold Benguela Current. The meeting of warm and cold currents produces fogs. Where the warm Gulf Stream meets the cold Labrador Current, one of the most dense fog banks in the world is created. Ocean currents also affect climate: warm currents keep the harbour open in winter and facilitate trade to be carried on throughout the year, ships are aided by the direction of the winds, and cold currents help cool the tropical seas and attract large number of fish to be caught for food.

Oceanography: The study of the ocean including the nature of the water, its movements, its temperature, its depth, the ocean bed, the flora and fauna, etc.



Dulley's Point — South Victoria, (Antarctica)

related to the amount of water which is available. The extent of the water available is determined by the amount of water which is available in the atmosphere.

nautical mile: A unit of length, equal to 1,852 metres (1,115.48 yards). It is used in navigation and in the measurement of distances at sea. It is equal to 1.852 kilometres.

oasis: A place where water is available in a desert or other arid region. It is usually a small area of land, often surrounded by a wall of sand or other natural barrier, and it is usually a source of water for the surrounding area.

ocean: A large body of water, usually salt water, which covers most of the earth's surface. It is the largest body of water on the planet, and it is the source of life for many organisms. The ocean is divided into five main basins: the Atlantic, the Pacific, the Indian, the Arctic, and the Southern Ocean. The ocean is also divided into many smaller bodies of water, such as the Mediterranean Sea, the Red Sea, and the Black Sea. The ocean is a vital part of the earth's ecosystem, and it plays a major role in the regulation of the earth's climate.

orbit: The path of a celestial body, e.g. earth, in their revolution around the sun. The orbit of the earth, as well as other planets, is very nearly circular, actually elliptical.

ozone: A form of oxygen present in minute amount in the atmosphere at its maximum concentration at about 20-25 km (11-15 miles) above the earth.

pastoral farming: The practice of breeding and rearing certain herbaceous animals, for example, reindeer in the tundra, sheep or goats in the desert or semi-desert lands, from which the inhabitants derive most of their necessities of life.

pampas: Wide treeless grassy plains in South America. They are suitable for cultivation of wheat, maize, alfalfa and flax and for cattle raising and dairy farming, giving rise to industries like meat packing, milling and processing of dairy products. See Prairies, Steppes.

penplain: A region almost like a plain. Due to erosion by rivers and rain all the elevated portions of a region are worn down to the same level.

perihelion: Position of the planet in its orbit when it is at its nearest distance to the sun.

winds throughout the lower atmosphere. It consists of calms and very light winds of the equatorial low-pressure belt—the Doldrums, the N.E. and S.W. Trade Winds blowing from the sub-tropical belts of high pressure towards the equator, S.W. and N.W. Westerlies on the poleward side of the Trade Winds, and N.E. and S.E. Polar Winds.

plateau: An extensive level area of elevated land. Sometimes the plateau is traversed by rivers and mountain ranges (Meseta of Spain); it may be exceptionally high as in the case of the Tibetan Plateau. It is usually called tableland when it is bordered by steep cliff-like faces.

port: A town with a harbour or a landing place at which ships and aircraft call to load and unload goods. It may be a river port, a sea port, an air port or a fish port.

Prairies: Level, grass-covered, treeless plains of Central and North America. With porous soil, the area is most fertile and productive. Wheat is the chief crop extensively cultivated here.

precipitation: Total amount of rainfall, sleet or snow at a particular place.

quartz: One of the commonest minerals present in many rocks and soils. It consists of silica and forms the major proportion of most sand.

quicksand: A mass of loose sand saturated with water at the mouth of a river.

radiation: Emission of radiant energy, e.g. in the form of heat by a body and its transfer through space. These operations include light, heat, X-ray, etc.

rainfall: The total amount of rain deposited on a given area during a given time. Melted snow and hail are included in rainfall. There are three different types of rainfall: orographic, cyclonic and convectional.

rain gauge: Meteorological instrument for measuring rainfall. A rain gauge usually consists of a cylindrical copper or glass vessel, containing a funnel for collecting rain and a bottle or other form of receiver. The contents are emptied at regular intervals into a measuring glass, graduated in millimetres or inches.

rain shadow: An area situated on the leeward side of a range of mountains and hills, where prevailing rain-bearing winds do not reach and therefore it has relatively light rainfall as compared to the windward side of the range. The best known examples are that of the Western Ghats in India. The western slopes on the windward side are exposed for about five months to the S.W. Monsoons and have heavy rainfall exceeding 5,000 mm, but on the eastern slopes—in the rain shadow area—the annual rainfall at many places is 600 mm or less.

reef: Ridge of rock or shingle or sand at or just above or below the surface of water. The most common type is the coral reef.

relative humidity: The ratio, expressed in percentage, between the actual amount of water vapour in a volume of the air and the amount which would be present when the air is fully saturated.

relief rain: Rains caused by the surface relief of land, e.g., a mountain system, the Western Ghats receive heavy relief rain on their windward slopes.

rift valley: A valley which has been formed by the sinking of land leaving a long and narrow opening with steep edges. The best known example is the rift valley in West Asia which extends through Syria, Israel and Jordan and East

Example: the Narmada Rift Valley in Madhya Pradesh

Riviera: Popular resorts and beaches on the coastal land of the Mediterranean in southern Europe, e.g., the Italian Riviera, French Riviera, Portuguese Riviera and Cornish Riviera

Rearing Forties: See under Westerlies

salinity: The degree of saltiness, expressed as the number of parts per thousand of the oceans and seas, lakes and rivers. The mean salinity of sea water, for instance, is 35 per 1,000. The degree of salinity depends on the amount of rainfall, the loss of water by evaporation and inflow of river water to seas and lakes

satellite town: Name given to a town which is associated with a large city though it is separated from the latter

Savanna: The region lying between the equatorial forests and the hot deserts in both the hemispheres where the prevailing type of vegetation is grass (elephant grass is the most common) and scattered trees. Savannas are also called Tropical Grasslands; the most extensive Savanna land is in Africa (Sudan, Kenya, Angola, Rhodesia, etc.). The Llanos in Venezuela and Campos in Brazil are other examples of Savanna lands.

scrub: Term used for tracts of low-growing shrubs or stunted trees in areas which have insufficient rain and poor soil, as in the hot deserts

sea breeze: The daily movement of air from the sea to the land caused by the difference in the heating of land and sea. During the day greater heat of the land causes the air to ascend and the heavy cooler air from the sea moves in to take its place. This is sea breeze (see land breeze).

sea level: The level at the surface of the sea not influenced by tides or waves (see mean sea level).

seismograph: Instrument used for detecting and registering vibrations of the earth's crust and especially those of earthquakes. The vibrations used to be recorded by a pen tracing on a revolving drum but in more modern instruments a photographic record is obtained on a moving film.

selvas: Dense tropical forests in the equatorial region of the Amazon Basin.

ship canal: A canal constructed to overcome the usual depth and width between two seas. Its function is to shorten the voyage. The best known ship canals are (i) **Suez Canal** connecting the Atlantic Ocean through the Mediterranean, Red Sea and the Red Sea with the Indian Ocean. It has shortened the distance between Southampton and England to Bombay by about 7,600 km (4,700 miles). It is about 160 km (100 miles) long and 16-200 m wide and has a depth of 13 m (42 ft). (ii) **Panama Canal** connecting the Atlantic and Pacific oceans. It is about 64 km (40 miles) long through deep water in the Caribbean to deep water in the Pacific, between 91 m (300 ft) to 30.5 m (100 ft) wide, with a minimum depth of 13 m (42 ft). The Panama Canal has considerably shortened the distance between London and San Francisco, New York and Japan. (iii) **Kiel Canal** which connects the North Sea and the Baltic Sea. It is 38 km (61 ft) long with a depth of 13 m (42 ft). This canal shortens the distance between London and Baltic ports by about 400 km (250 miles).

sial and sima: Sial is the outer layer of the comparatively light rock of the lithosphere including granite, lying beneath the continents.

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WORLD

CONTINENTS

Name	Area in million sq km	Percentage of earth's area	Estimated population in million	Highest point in metres	Lowest point in metres
Asia	43.7	29.5	231.6	Everest 8,848	Dead Sea 395
Africa	30.0	20.0	40.0	Kilimanjaro 5,895	Lake Assai 156
North America	23.0	17.4	34.3	McKinley 6,200	Death Valley 86
South America	18.4	11.8	22.0	Aconcagua 6,958	Valdes Penia 39
Europe	10.0	6.5	66.0	Elbrus 5,642	Caspian Sea 28
Australia*	7.7	5.2	14.0	Kosciusko 2,230	Lake Eyre 15
Antarctica	14.3	9.6	-	Vinson Massif 5,140	

*Australia, along with New Zealand, Tasmania, New Guinea and the Pacific island, (Micronesian, Melanesian and Polynesian islands), is called Australasia by some geographers and Oceania by others.

COUNTRIES

(With a population of over 1m.

1m = 10 lakhs, 10m = 1 crore)

AFRICA

Country	Capital	Population	Language	Currency
Algeria	Algiers	21m (1982)	Arabic & French	Dinar
Angola	(Sao Paulo de) Luanda	7.08m (1982)	Portuguese (official) & Bantu	Kwanza
Benin	Porto Novo	3.72m (1982)	French (official) & Fon Yoruba	CFA Franc
Burund	Bujumbura	4.38m (1979)	French, Kirundi & Swahili	Franc
Cameroon	Yaounde	8.85m (1982)	French & English	CFA Franc
Central African Republic	Bangui	2.48m (1982)	French & Sangho	CFA Franc
Chad	N'Djamena	4.75m (1982)	French (official) & Turku-Sara	CFA Franc
Congo	Brazzaville	1.63m (1982)	French (official), Lingala & Monokutba	CFA Franc
Egypt	Cairo	44m (1982)	Arabic	Egyptian Pound
Ethiopia	Addis Ababa	32.4m (1982)	Amharic (official), Tigrinya, Tigre & English	Birr
Gabon	Libreville	1.23m (1981)	French & Bantu	CFA Franc
Ghana	Accra	11.31m (1980)	English & 8 national languages	Cedi
Guinea	Conakry	5.28m (1982)	French (official) & 8 national languages	Sylli
Ivory Coast	Abidjan	8.92m (1982)	French (official), Kanjala & Agni	CFA Franc
Kenya	Nairobi	15.8m (1980)	Swahili & English	Shilling
Lesotho	Maseru	1.3m (1980)	English & Lesotho	Loti (plural Maloti)
Liberia	Monrovia	1.9m (1981)	English (official), Pidgin, Vai, Mandingo	Dollar
Libya	Tripoli & Benghazi, El Beda	3.5m (1982)	Arabic	Dinar

Malagasy (Madagascar)	Antananarivo	9.2m (1982)	Malagasy & French	Franc
Malawi	Lilongwe	5.9m	English	Kwacha
			Chichewa & Chinyanja	
Mali	Bamako	7.02 (1982)	French (official), Tuareg & Bambara	Mali Franc
Mauritania	Nouakchott	1.73m (1982)	Arabic, French	Ouguiya
Morocco	Rabat	21m (1983)	Arabic & French	Dirham
Mozambique	Maputo	13.25m (1982)	Portuguese & Bantu	Metical (1980)
Niger	Niamey	5.62m (1982)	French (official), Hausa & Djerna	CFA Franc
Nigeria	Lagos	90m (1982)	English & Hausa	Naira
Rwanda	Kigali	5.11m (1981)	French & Kinyarwanda	Franc
Senegal	Dakar	5.97m (1982)	French (official), Wolof	CFA Franc
Sierra Leone	Freetown	3.47m (1980)	English (official) & Krio	Leone
Somalia	Mogadiscio	3.86m (1982)	Somali & English	Shilling
South Africa	Pretoria	25.59m (1982)	Afrikaans & English	Rand
Sudan	Khartoum	18.9m (1981)	Arabic & English	Pound
Tanzania	Dodoma	18.5m (1981)	English (official) & Kiswahili	Shilling
Togo	Lome	2.85m (1982)	French (official), Hausa & Ewe	CFA Franc
Tunisia	Tunis	6.75m (1982)	Arabic & French	Dinar
Uganda	Kampala	13.22m (1979)	English (official) & Kiswahili	Shilling
Upper Volta (Burkina Faso)	Ouagadougou	7.29m (1982)	French (official) & More	CFA Franc
Zaire	Kinshasa	29.75m (1982)	French (official) & Lingali	Zaire
Zambia	Lusaka	5.7m (1980)	English (official) & Bemba	Kwacha
Zimbabwe	Harare (Salisbury)	7.7m (1981)	English (official), Shona & Ndebele	Dollar

*CFA = CURRENCY French African
Value = 1/5 French Franc

NORTH AMERICA

Country	Capital	Population	Language	Currency
Canada	Ottawa	8.85m (1982)	English (80%) & French	Dollar
Costa Rica	San Jose	2.34m (1982)	Spanish	Colon
Cuba	Havana	9.71m (1981)	Spanish	Peso
Dominican Republic	Santo Domingo	5.2m (1981)	Spanish	Peso
El Salvador	San Salvador	4.54m (1980)	Spanish	Colon
Guatemala	Guatemala City	7.25m (1981)	Spanish	Quetzal
Haiti	Port-au-Prince	6m (1982)	French & Creole	Gourde
Jamaica	Kingston	2.19m (1980)	English	Jamaican Dollar
Mexico	Mexico City	72.1m (1982)	Spanish	Mexican Peso
Nicaragua	Managua	2.5m (1980)	Spanish & English	Cordoba
Panama	Panama City	1.83m (1980)	Spanish	Balboa
United States of America (USA)	Washington D.C.	226.5m (1980)	English	US Dollar

SOUTH AMERICA

Country	Capital	Population	Language	Currency
Argentina	Buenos Aires	27.95m (1980)	Spanish	Peso
Bolivia	La Paz	6.08m (1983)	Spanish	Peso
Brazil	Brasilia	119m (1980)	Portuguese	Cruzeiro
Chile	Santiago	11.5m (1982)	Spanish	Peso
Colombia	Bogota	27.5m (1981)	Spanish	Peso

sima is the inner layer of the comparatively heavy rocks lying at the lower level than the sial, beneath the ocean basins. The words sial and sima stand for the first letters of the two commonly occurring elements in these layers: sial—silicon (Si) and aluminium (Al); and sima—silica (Si) and magnesium (MA).

sidereal day: The period of time during which the earth completes a rotation on its axis (in relation to the fixed stars) and which equals 23 hours 56 minutes and 4 seconds, almost four minutes less than the mean solar day.

Simoom: Hot, desert sandstorms experienced in the Sahara and the Arabian deserts; carrying dense masses of sand, the Simoom moves from south to north and from east to west.

Sirocco: Hot, dry wind that is experienced over the northern shores of the Mediterranean in Sicily and south Italy. It withers vegetation and causes much damage to crops. In Egypt, the wind is known as the Khamain, in Spain as the Leveche, in Tunis as the Chili, in Libya as the Gibli.

TAIWAN'S STATUS

Taiwan, formerly known as Formosa, is an island in the Chinese Sea some 144 km (90 miles) east of the Chinese mainland. It was ceded to Japan by China in 1895. After World War II (1939-45), the island was surrendered by Japan to General Chiang Kai Shek, the then head of the government in China on the mainland, in September 1945. Towards the end of the war against the Chinese communist regime, the General withdrew to Taiwan, in 1949, with 500,000 nationalist troops and made Taiwan the headquarters of the Nationalist Republic of China. USA signed a Mutual Defence Treaty with Taiwan in 1954 and Taiwan became the original member of the UN representing all China on Oct 24, 1955.

Although Taiwan still claims to be the legal government of all China, it lost its membership of the UN and its permanent seat in the Security Council to the People's Republic of China in October 1971.

USA broke diplomatic relations with Taiwan on Jan 1, 1979 and established relations with the Peking (Beijing) Government. India has no diplomatic relations with Taiwan but it maintains friendly relations with it at commercial and cultural levels.

soil erosion: Wearing away of the topsoil by action of wind and rain.

solar day: The time interval between two successive appearances of the sun over the same meridian which comes to 24 hours.

solstice: At the tropics the sun is seen at mid-day—on Jun 21, at the Tropic of Cancer, and on Dec 22, at the Tropic of Capricorn; these dates are known as Summer and Winter Solstices respectively.

spot heights: Indications in figures on a map regarding the height above sea level; a line joining all points of equal heights is called contour line.

spring: Natural outflow of water from ground and rock. Water percolates through a permeable bed such as sandstone or limestone until it reaches one that is impermeable; here it accumulates till the pressure forces it out of surface.

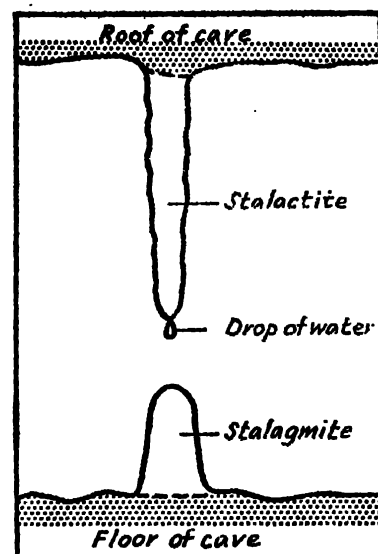
Ecuador	Quito	8.6m (1981)
Paraguay	Asuncion	3.02m (1982)
Peru	Lima	18.3m (1982)
Trinidad & Tobago	Port-of-Spain	1.2m (1980)
Uruguay	Montevideo	2.9m (1982)
Venezuela	Caracas	14.63m (1981)

ASIA

Country	Capital	Population	Language	Currency
Afghanistan	Kabul	16.28m (1981)	Pashtu, Dari & Persian	Afghani
Bangladesh	Dhaka	89m (1981)	Bangla	Taka
Bhutan	Thimphu	1.1m (1979)	Dzongkha, Bumthangkha & Nepali	Ngultrum
Burma	Rangoon	33m (1979)	Burmese	Kyat
China	Beijing	1.008m (1982)	Chinese (Mandarin)	Yuan or Renminbi
Hong Kong	Victoria	5.23m (1982)	English & Cantonese	Hong Kong Dollar
India	New Delhi	648m (1981)	Hindi, English & 15 regional languages	Rupee
Indonesia	Jakarta	154m (1981)	Bahasa Indonesia	Rupiah
Iran	Teheran	44.55m (1982)	Farsi (Persian)	Rial
Iraq	Baghdad	19m (1982)	Arabic	Iraqi Dinar
Israel	Jerusalem	3.92m (1981)	Hebrew & Arabic	Shekel
Japan	Tokyo	117.8m (1981)	Japanese	Yen
Jordan	Amman	2.23m (1980)	Arabic	Dinar
Kampuchea	Phnom Penh	5.76m (1981)	Khmer	Riel
Korea (North)	Pyongyang	16m (1975)	Korean	Won
Korea (South)	Seoul	38.72m (1981)	Korean	Won
Kuwait	Kuwait City	1.46m (1981)	Arabic & English	Dinar
Laos	Vientiane	3.52m (1979)	Lao & French	New Liberation Kip (1981)
Lebanon	Beirut	2.6m (1980)	Arabic & French	Lebanese Pound
Malaysia	Kuala Lumpur	14.42m (1982)	Bahasa/Malaysia (official) & English	Ringgit
Mongolia	Ulan Bator	1.73m (1981)	Mongolian	Tugrik
Nepal	Kathmandu	15.02m (1981)	Nepali or Gurkhali	Rupee
Oman	Muscat	1.5m (1982)	Arabic	Rial
Pakistan	Islamabad	85.6m (1982)	Urdu & English	Rupee
Philippines	Manila	50.74m (1982)	Filipino & English	Peso
Saudi Arabia	Riyadh	8.63m (1981)	Arabic	Rial
Singapore	Singapore City	2.47m (1982)	Chinese (Mandarin), Malay & English	Singapore Dollar
Sri Lanka	Colombo	14.9m (1981)	Sinhala, English & Tamil	Rupee
Syria	Damascus	9.31m (1981)	Arabic, Armenian & Kurdish	Syrian Pound
Taiwan	Taipei	18.27m (1982)	Chinese (Mandarin)	New Taiwan Dollar
Thailand	Bangkok	48.4m (1982)	Thai	Baht
Turkey	Ankara	45.7m (1981)	Turkish & Arabic	Turkish Lira
United Arab Emirates (UAE)	Abu Dhabi	1.04m (1980)	Arabic	Dirham
Vietnam	Hanoi	54m (1981)	Vietnamese (Quoc-Ngu)	Dong
Yemen (North)	Sana	7.7m (1980)	Arabic	Rial
Yemen PDR (South)	As Shaab (Aden)	2m (1980)	Arabic	Dinar

AUSTRALIA

Country	Capital	Population	Language	Currency
Australia	Canberra	14.92m (1981)	English	Australian Dollar
Papua New Guinea	Port Moresby	3.08m (1981)	English, Pidgin & Hiri Motu	Kina
New Zealand	Wellington	3.2m (1982)	English	New Zealand Dollar



stalactite and stalagmite: A stalactite is an icicle-shaped column of calcium carbonate hanging from a roof of a limestone cave, deposited by dripping ground water; a stalagmite is found on the floor of a cave and grows upwards. If the two meet, a pillar is formed.

standard time or zonal time: Standardisation of time on the basis of a selected standard meridian over a given area. The world has been divided into 24 zones of 15° longitude each representing an hour, within each such zone, the time is uniform but it changes by one hour when the next zone is reached. The standard meridian of India is 82° 30' E, running close to Allahabad and Madras and the standard time is 5½ hours ahead of the Greenwich Mean Time (GMT).

Steppes: Grass-covered plains of Eurasia extending over the lower regions of the Danube, and in a broad belt over southern European USSR and south-west Siberia. They resemble the Prairies in North America and the Pampas in South America.

strait: A narrow stretch of sea connecting two extensive areas of sea across an isthmus.

submarine ridges and plateaus: Mountain ranges and mountain systems rising above the ocean floors; if they are long and narrow they are generally known as Submarine Ridges, if broad and large they are called Submarine Plateaus or Rises. The best known example is the Mid-Atlantic Ridge.

subsistence farming or agriculture: The type of farming in which crops grown are consumed mainly by the grower and his family. In India subsistence agriculture is practised in the lesser developed parts of Madhya Pradesh, Bundelkhand, eastern UP and south Bihar.

sun spot: A spot or irregular area on the surface of the sun. It consists of a whirling mass of gas just within the sun's atmosphere. The sun-spots are believed to cause magnetic and electrical disturbances on the earth.

Taiga: Coniferous forests of the Northern Hemisphere, e.g., North America, specifically the name is given to the forest land of Siberia.

tectonic movements: Earth movements which break, bend and warp the structure of the earth's crust and result in moving the earth's surface creating depressions and elevations.

temperate zone: See under zones.

terai: Large tracts of marshy jungles at the

(Continued on page 36)

EUROPE

Country	Capital	Population	Language	Currency
Albania	Tirane	2.7m (1982)	Tosk & Ghaq	Lek
Austria	Vienna	7.56m (1981)	German & Slovenic Croatian	Schilling
Belgium	Brussels	9.8m (1981)	French, Dutch & German	Belgian Franc
Bulgaria	Sofia	8.89m (1981)	Bulgarian	Lev (plural: Leva)
Czechoslovakia	Prague	15.28m (1980)	Czech & Slovak	Koruna
Denmark	Copenhagen	5.12m (1982)	Danish	Krone
Eire (Ireland)	Dublin	3.44m (1981)	Irish & English	Pound
Finland	Helsinki	4.81m (1981)	Finnish & Swedish	Markka
France	Paris	54.09m (1982)	French	Franc
German Democratic Republic (GDR)	Berlin (East)	16.74m (1981)	German	Mark (M.D.M.)
Federal Republic of Germany (FRG)	Bonn	61.7m (1981)	German	Mark (D.M.)
Greece	Athens	9.7m (1981)	Greek	Drachma
Hungary	Budapest	10.71m (1981)	Hungarian	Forint
Italy	Rome	56m (1981)	Italian	Lira
Netherlands	Amsterdam	14.25m (1981)	Dutch	Guilder
Norway	Oslo	4.1m (1981)	Bokmal & Nynorsk	Krone
Poland	Warsaw	35.9m (1982)	Polish	Zloty
Portugal	Lisbon	9.8m (1981)	Portuguese	Escudo
Romania	Bucharest	22.2m (1980)	Romanian	Leu (plural: Lei)
Spain	Madrid	37.75m (1981)	Spanish	Peseta
Sweden	Stockholm	8.3m (1981)	Swedish	Krona
Switzerland	Berne	6.4m (1980)	French, German & Italian	Swiss Franc
Union of Soviet Republics (USSR)	Moscow	271.2m (1983)	Russian	Rouble
United Kingdom of Great Britain & Ireland (UK)	London	55.93m (1976)	English	Pound Sterling
Yugoslavia	Belgrade	22.43m (1981)	Serbo-Croat	Dinar

Source: *Statesman Year Book (1983-84)*

COUNTRY AREAS

Country	Area in sq km
USSR	22,402,200
Canada	9,976,139
China	9,596,961
USA	9,372,641
Brazil	8,511,965
Australia	7,686,848
India	3,287,590
Argentina	2,766,889
Sudan	2,505,813
Algeria	2,381,741
Zaire	2,345,409
Saudi Arabia	2,149,690
Mexico	1,972,546
Indonesia	1,904,569
Libya	1,759,540
Iran	1,648,000
Mongolia	1,565,000
Peru	1,285,216
Chad	1,284,000
Niger	1,267,000

Source: *UN Map, July 1984*

POPULATIONS

Country	Estimated population (mid-year 1983)
China	1,039,677,000
India	732,256,000
USSR	273,158,000
USA	233,700,000
Indonesia	159,434,000
Brazil	129,660,000
Japan	119,258,000
Bangladesh	94,650,520
Pakistan	89,729,000
Nigeria	89,022,000
Mexico	75,103,000
Germany (FRG)	61,420,736
Vietnam	57,181,000
Italy	56,559,000
UK	56,100,000
France	54,652,000
Philippines	51,956,071
Thailand	49,459,000
Turkey	47,729,000

Source: *UN Map July 1984*

ISRAEL'S CAPITAL

A resolution proclaiming Jerusalem as the country's capital in place of Tel Aviv was adopted by the Israel Parliament on Jan 23, 1950. Most of the government departments

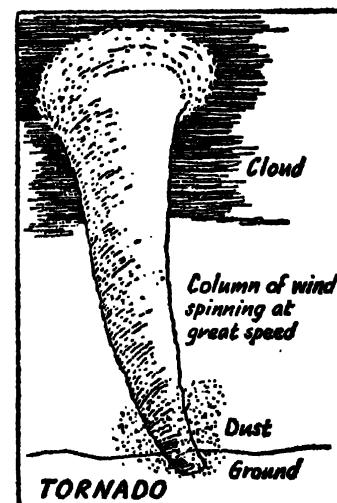
have been located in Jerusalem. However, Jerusalem is not recognised as the capital by the UN, Afro-Asian countries, including India, recognise Tel Aviv as Israel's capital.

(Continued from page 35)

foot of the Himalayas. This is the home of India's wildlife, some of this land has been cleared for agriculture.

territorial waters: Belt of sea surrounding the coast of a state and subject to its jurisdiction; generally a 12-mile limit of territorial water is recognised for a country's jurisdiction.

topography: A detailed description of the features both natural and artificial, e.g., relief, rivers, valleys, railways, roads, etc of an area.



tornado: Violent storm, usually accompanied by torrential rain, which occurs in the Guinea land of South Africa and in the US, in the central plains of the Mississippi Basin; the wind velocity of a tornado exceeds 300 km per hour, bringing in its wake much destruction.

torrid zone: See zones

Trade Winds: The regular winds which blow from the high-pressure belts of the sun tropics towards the low-pressure belts of the equatorial region, between 35° N and 9° N and 30° S and 1° S, in both the hemispheres. These winds blow with extreme regularity throughout the year, especially over the oceans. Trade Winds derive their name from the expression 'to blow trade' meaning 'to blow along a regular track'.

tropical cyclone: See under hurricane and typhoon

tropics: The part of the earth lying between the equator and 23½° N bounded by the Tropic of Cancer in the Northern Hemisphere, and between the equator and 23½° S bounded by the Tropic of Capricorn in the Southern Hemisphere. The region lying between the two tropics is known as the Torrid Zone where the weather is always hot because the sun's rays fall directly overhead twice a year within this zone.

truck farming: Specialised and intensive cultivation of vegetables and fruits farther away from the markets and involving transport. This system is well-developed in the US, and in the densely populated industrial districts of North-West Europe—Britain (also known there as market gardening), Denmark, Belgium, the Netherlands, Germany and France.

Tundra: Cold desert area of northern Siberia and North America along the Arctic Circle. During the long winter the region is covered with ice and snow; in summer the surface thaws just enough for moss or lichen and low shrubs to grow. Reindeer and the caribou are the two well-known Tundra animals.

Town	Country	River
Dundee	Scotland	Tay
Ferozepur	India	Sutlej
Glasgow	Scotland	Clyde
Hull	England	Humber
Hamburg	West Germany	Elbe
Hardwar	India	Ganges
Jabalpur	India	Narmada
Jamshedpur	India	Subarnarekha
Kabul	Afghanistan	Kabul
Kanpur	India	Ganges
Karachi	Pakistan	Indus
Khartoum	Sudan	Blue and White Nile
Lahore	Pakistan	Ravi
Leh	India	Indus
Lisbon	Portugal	Tagus
Liverpool	England	Mersey
London	England	Thames
Lucknow	India	Gomti
Ludhiana	India	Sutlej
Montreal	Canada	St Lawrence
Moulmein	Burma	Sittoung
Nanking	China	Yangtze River
Nasik	India	Godavari
Newcastle	England	Tyne
New Orleans	USA	Mississippi
New York	USA	Hudson
Ottawa	Canada	Ottawa
Paris	France	Seine
Patna	India	Ganges
Philadelphia	USA	Delaware
Prague	Czechoslovakia	Vltava
(Prah)	(Moldavia)	(Danube)
Quebec	Canada	St Lawrence
Rangoon	Burma	Irawaddy
Rome	Italy	Tiber
Rotterdam	The Netherlands	New Maas
Shanghai	China	Yangtze-Kiang
Srinagar	India	Jhelum
Surat	India	Tapti
Varanasi	India	Ganges
Vienna	Austria	Danube
Vijayawada	India	Krishna
Warsaw	Poland	Vistula
Washington (DC)	USA	Potomac

The world's tallest
fountain macullock
fountain, at fountain
Hills, Arizona.

From **Great Rivers Of The World**

zones: The basin has been further subdivided into three zones: the northern and southern *Crucifera* zone, the *Thalassioidea* zone, and the *Thalassioidea* zone, with the latter two zones being the most common.

OCEANS & SEAS

(Areas & greatest depths)

Ocean	Depth		Area	
	Metres	Feet	Sq km	Sq miles
Pacific Ocean	11,034	36,198	16,538,000	6,385,000
Atlantic Ocean	8,381	27,498	8,221,000	3,174,000
Indian Ocean	8,047	26,400	7,348,000	2,837,000
Arctic Ocean	5,450	17,880	1,405,000	542,000
Mediterranean Sea	4,846	15,900	2,505,000	967,000
South China Sea	5,514	18,090	2,318,000	895,000
Bering Sea	5,121	16,800	2,269,000	876,000
Caribbean Sea	7,492	24,580	1,943,000	750,000
Gulf of Mexico	4,377	14,360	1,544,000	596,000
Sea of Okhotsk	3,475	11,400	1,528,000	590,000
East China Sea	2,899	9,840	1,248,000	482,000
Yellow Sea	31	100	1,243,000	480,000
Hudson Bay	259	850	1,233,000	476,000
Sea of Japan	3,743	12,280	1,008,000	389,000
North Sea	661	2,170	575,000	222,000
Black Sea	2,243	7,360	461,000	178,000
Red Sea	2,246	7,370	438,000	169,000
Baltic Sea	439	1,440	422,000	163,000

Source: *Times Atlas Of The World, Comprehensive Edition 1981*

LAKE AREAS

(Areas are average and some subject to seasonal variations)

Lake	Countries	Water	Areas	
			Sq km	Sq miles
Caspian	USSR-Iran	(salt)	3,710,000	1,432,244
Superior	USA-Canada	(fresh)	83,270	32,150
Victoria	Kenya-Uganda	(fresh)	68,800	26,560
	Tanzania			
Aral	USSR	(salt)	65,500	25,300
Huron	USSR-Canada	(fresh)	60,700	23,430
Michigan	USA	(fresh)	58,020	22,400
Tanganyika	Tanzania-Zambia-Zaire-Burundi	(fresh)	32,900	12,700
Great Bear	Canada	(fresh)	31,790	12,270
Baikal	USSR	(fresh)	30,500	11,800
Great Slave	Canada	(fresh)	28,440	10,980
Erie	USA-Canada	(fresh)	25,680	9,910
Winnipeg	Canada	(fresh)	24,510	9,460
Ontario	USA-Canada	(fresh)	19,230	7,430
Chad	Nigeria-Niger	(fresh)	10-26,000	4-10,000
	Chad-Cameroon			
Eyre	Australia	(fresh)	0-8,900	0-3,430

Source: *Times Atlas Of The World*

PRINCIPAL RIVERS

River	Location	Length in km	Description *
Nile	Africa	6,695	White Nile originates from Lake Albert in Uganda and Blue Nile from Ethiopia; the two join together at Khartoum in Sudan to form River Nile. After flowing through Egypt (the river's longest course) near Alexandria, it falls into the Mediterranean Sea.
Amazon	South America	6,570	Originates from the Andes Mountain in Peru; tributaries come from Bolivia, Ecuador and Venezuela; the river flows through Brazil, and falls into the Atlantic Ocean.
Yangtze-Kiang	Asia	6,380	Rises in north-east Tibet, and flows through central China, draining into the East China Sea.
Mississippi-Missouri	North America	6,020	Mississippi rises in Lake Itasca in Minnesota state of USA; Missouri joins it at Saint Louis; together, they flow into the Gulf of Mexico at New Orleans.
Ob-Irtysh	Asia	5,400	Ob originates from the Altai mountains in Siberia; Irtysh from Sinkiang province of China; joining together, they flow through Siberia (Asiatic territory of USSR) and empty into the Arctic Ocean.
Hwang Ho (Yellow River)	Asia	4,840	Rises in Tibet and flows through China to the Pacific Ocean in the Gulf of Chih-le.
Zaire (Congo)	Africa	4,630	Rises in Zambia, flows through Zaire (previously called Congo) and empties into the Atlantic Ocean.
Parana	South America	4,500	Rises from Brazilian Highlands, follows Paraguay's borders, enters Argentina and flows into Rio de la Plata in the Atlantic Ocean.
Irtysh	Asia	4,400	Originates from the south-west slopes of Altai Mountains in Sinkiang province of China, joins Ob and flows through Siberia; together, they fall into the Arctic Ocean.
Amur	Asia	4,416	Rising from the Pamirs in Inner Mongolia and flowing through Siberia, it enters the Pacific Ocean at the Sea of Okhotsk.
Lena	Asia	4,400	Rises near Lake Baikal, flows through Siberia and falls into the Laptev Sea of the Arctic Ocean.
Mackenzie	North America	4,340	Rising in Great Slave Lake, it flows through Canada to Mackenzie Bay in the Arctic Ocean.
Mekong	Asia	4,180	Rises in Tibet, enters China through which it flows and later forms, for some distance, the borders between Thailand and Laos and falls into the South China Sea.
Niger	Africa	4,100	Rising near Sierra Leone, it crosses Niger and flows through Nigeria and enters the Atlantic Ocean at the Gulf of Guinea.
Yenisey	Asia	4,090	Rises in the mountains of Mongolia and flows across Siberia (USSR) into the Arctic Ocean.
Missouri	North America	3,969	Source: Rocky Mountains in Montana (USA). It joins Mississippi near St Louis and flows into the Gulf of Mexico.
Mississippi	North America	3,779	See Mississippi-Missouri.
Murray-Darling	Australia	3,750	Murray rises in the Australian Alps. Darling, its biggest tributary, joins it in the state of New South Wales. Both empty into the Indian Ocean at Encounter Bay.
Volga	Europe	3,668	Rises in Valdai Plateau north-west of Moscow, USSR, and enters the Caspian Sea at Astrakhan.
Madeira	South America	3,240	Formed on the Bolivia-Brazil border, it flows 1,450 km through Brazil and enters River Amazon. Both empty into the Atlantic Ocean.
Indus	Asia	3,180	Rises from Mount Kailas, in Tibet; flows through the Kashmir gorges; is joined by its

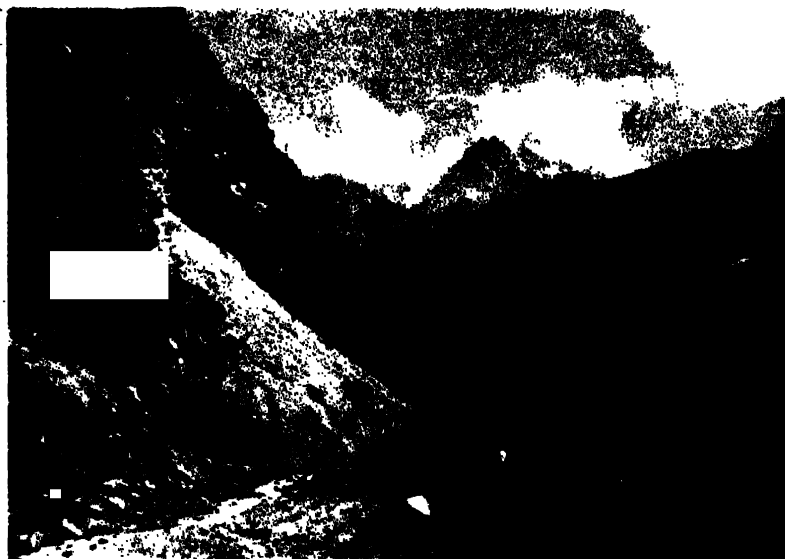
*The country through which the river has the longest course is italicised.

Brahmaputra	Asia	2,960
Ganges	Asia	2,700
Danube	Europe	2,820

tributaries in the plains of Punjab, and passes into Sind (*Pakistan*) to fall into the Arabian Sea
 Rises in Tibet; flows some 1,280 km through the Himalayas and the plains of Assam, *India*; and joins the easternmost branch of the Ganges in Bangladesh, both emptying into the Bay of Bengal
 Rises near glacier Gangotri in the Himalayas, and flows through UP, Bihar and Bengal (*India*) to fall into the Bay of Bengal
 Rises near Baden in West Germany, flows through *Austria*, Hungary, Czechoslovakia and Yugoslavia, crosses Romania and enters the Black Sea

MOUNTAIN HEIGHTS

Peak	Country(ies)	Metres	Feet
*Everest	Nepal-Tibet	8,848	29,028
**K2(Godwin Austen)	India	8,611	28,250
***Kanchenjunga	Nepal-India	8,585	28,168
Makalu	Tibet-Nepal	8,475	27,805
Dhaulagiri	Nepal	8,172	26,810
Nanga Parbat	India	8,126	26,600
Annapurna	Nepal	8,078	26,504
Gasher-Brum	India	8,068	26,470
Xiz-abangma Feng (Gosainthan)	Tibet	8,013	26,291
Nanda Devi	India	7,816	25,645
Raka Poshi	India	7,780	25,550
Kamet	India-Tibet	7,756	25,447
Namcha Bawra	Tibet	7,756	25,447
Gurla Mandhata	Tibet	7,728	25,355
Muztagh	China	7,723	25,338
Tinch Mir	Pakistan	7,690	25,230
Gongga Shan	China	7,590	24,903
Muztagh Ata	China	7,546	24,757
Pik Kummunizma	USSR	7,495	24,590
Chomo Lhari	Bhutan-Tibet	7,313	23,993
Pik Lenina	USSR	7,134	23,406
Ojos del Salado	Chile-Argentina	7,084	23,240



Nanda Devi

*The name Everest to the world's highest mountain peak was given in 1865 by Sir George Everest (1790-1866), the British Surveyor-General of India who established its location and altitude. The Tibetan name for the peak is 'Chomolungma', which means the Goddess Mother of the Earth.

**K2 (Godwin Austen) was the second peak to be measured during the survey of the Karakoram Range (hence K2). It was named in 1888 after its first surveyor, Lt Col Henry Godwin Austen (1834-1923).

***Kanchenjunga: The word means 'Five Treasures of the Eternal Snows'. In Tibet, it refers to the mountain's five peaks. Tibetans believe that the god of wealth resides there storing on its five peaks the five treasures: gold, silver, copper, corn and sacred books.

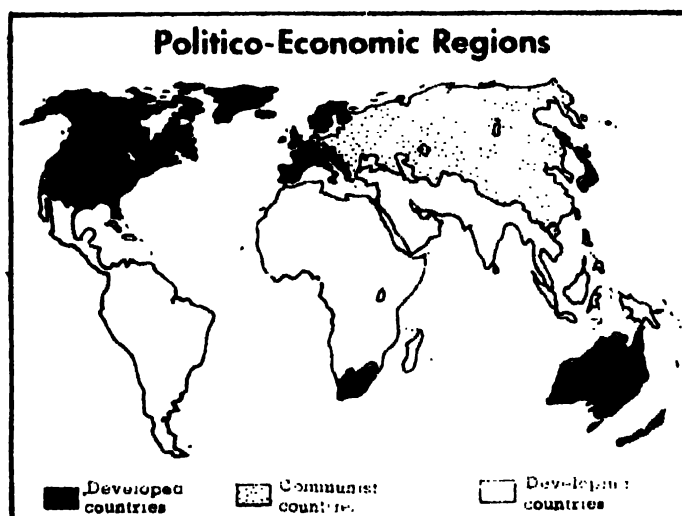
Most of the other Himalayan peaks derive their names from Hindu and Tibetan mythology or their mystical traditions. To the Hindus, the peaks of the Himalayas (abode of snow) are the petals of the Golden Lotus that God Vishnu created as a first step in the formation of the universe. To the Tibetans, the Himalayan peaks are the sacred ground for a multitude of gods and devils. The names of the peaks like Nanda Devi, Gosainthan, are after the names of the local deities. Annapurna means the 'giver of life' as the mountain is the source of sustenance and is worshipped by the inhabitants. Nanga Parbat means 'naked mountain' because its steep cliffs can hold no permanent snow.

Source: *Times Atlas Of The World*

REGIONAL GROUPINGS

From the geographical point of view, some regions in the world map stand out distinctly from the rest of the continent(s) and they show marked physical and social unity. Although there is some difference of views about their territorial limits and the countries included, the generally accepted regions from the geopolitical angle are: *South Asia, South-East Asia, West Asia, East Asia, the Caribbeans, Central America and Latin America*. The *Third World*, *North-South* and *East-West* are names with geographical connotations, now current; the basis of this regional grouping is more politico-economic than geographic. (Note: For regional groupings, we have adopted the classification as followed by the External Affairs Ministry of the Indian Government.)

Region	Description	Countries
South Asia	Geographically, the countries of the Indian subcontinent constitute this region; geopolitically, India groups the 7 countries shown in the next column under South Asia. These countries, including Maldives, (an archi-	India, Sri Lanka, Bangladesh, Bhutan, Nepal, Pakistan and Maldives



Region	Description	Countries
	pelago in the Indian Ocean south-west of India), are members of the South Asia Regional Cooperation (SARC). Burma, which is part of the subcontinent, is not included here but grouped under the South-east Asia region.	
South-East Asia	Collective name given to the series of peninsulas and islands which lie to the east of India and to the south of China. (India lists Burma in this regional group)	Burma, Thailand, Indonesia, Brunei, Kampuchea, Singapore, Malaysia, Philippines, Laos and Vietnam.
West Asia (Middle East)	<ul style="list-style-type: none"> ● The Asia region west and south-west of the Indian subcontinent, embracing the countries towards the eastern fringe of Africa and the Mediterranean Sea ● Referred to as the Middle East by the Western countries. In this group, they include, in addition to the West Asian countries, the North African countries of Egypt, Sudan, Libya, Tunisia, Algeria and Morocco ● Afghanistan, Turkey and Cyprus, which are located in this region, are not officially listed by India in the West Asian group ● Syria, Lebanon, Israel and Cyprus, which border the Mediterranean Sea, are collectively known as the <i>Levant</i>. 	Iran, Iraq, Bahrain, Oman, Qatar, Saudi Arabia, Kuwait, UAE, Jordan, Lebanon, Syria, North Yemen, South Yemen, Israel, (Afghanistan, Turkey and Cyprus).
East Asia (Far East)	This region includes the East Asian countries not shown under South Asia and South-East Asia; referred to as the Far East also.	China, Taiwan, Japan, North Korea and South Korea
The Caribbeans	<ul style="list-style-type: none"> ● String of archipelagos and islands around the Caribbean Sea in the Atlantic Ocean which stretch from near Florida in the US to the Venezuelan coast of South America. These islands form the heartland of Caribbean culture. But other islands in mid-Atlantic, and on the north-east fringe of Central America are also considered an integral part of the Caribbean area. Despite wide diversity in size, ancestry, language, population density and political organisation, the countries of the Caribbean show a common culture as a result of their somewhat parallel experiences as plantation colonies. ● The region covers roughly 90,560 sq miles with a total population of 3,00,00,000. 	1 The West Indies (independent territories)—Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, St Lucia, Trinidad & Tobago; (dependent/associated territories)—Anguilla, Antigua, Guadeloupe, Martinique, Montserrat, *Puerto Rico, Virgin Islands 2. Bahamas, Bermuda, Guyana and Surinam
Central America	Region between 8°N and 18°N, it lies south of Mexico (North America) and north of Colombia (South America) comprising 7 republics.	British Honduras, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama.
Latin America	<ul style="list-style-type: none"> ● Name given to South and Central America where the predominant language spoken is Spanish. Spanish is derived from the old classical Latin. ● The Portuguese-speaking 	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela.

Region	Description	Countries
	Brazil in South America also forms part of this.	
	<ul style="list-style-type: none"> ● Central America is spoken of as a separate region, as shown above 	
The Third World	<ul style="list-style-type: none"> ● Omnibus term for the world's underdeveloped countries, also referred to as Less Developed Countries (LDCs). ● Embraces the third element in the world power structure, the other two being the so-called "free world" of the US-led Atlantic alliance and of the USSR-led East European Communist bloc. ● The Third World comprises about 60% of the earth's surface and 70% of the human race, embracing about 100 nations with a population of over 3,000m ● Common characteristics of Third World countries would appear to be, economically poor and technologically less advanced; high proportion of subsistence agriculture, reliance on one or two cash crops for export, minimal manufacturing industry, expanding population (expected to reach 5,000m by 2000 AD) ● There is great diversity among LDCs in climate, terrain, geographical position, cultural tradition, demographic situation and Gross National Product. 	Embraces about 100 countries of Asia, Africa and Central America. Among them, most are NAM members.
North-South	<ul style="list-style-type: none"> ● North refers to the rich, industrialised, developed countries of the north (of high latitudes) and South to the underdeveloped and developing countries of the south (of low latitudes) ● The North-South Dialogue is concerned with the Third World's demand for a New International Economic Order. 	
East-West	East refers to the communist bloc and West to the non-communist bloc, the one dominated by the USSR and the other by the US	

*Ceded by Spain to the US by the treaty of Dec 10, 1898; name changed from Porto Rico to Puerto Rico by an Act of Congress. On Nov 27, 1953, President Dwight Eisenhower of the US sent a message to the UN General Assembly stating 'if at any time the Legislative Assembly of Puerto Rico adopts a resolution in favour of more complete or even absolute independence' he 'will immediately thereafter recommend to Congress that such independence be granted'. Since parties advocating full independence for Puerto Rico have polled no more than 5% of the total seats in the Assembly, it continues to be a US territory.

DID YOU KNOW THAT...

- the total length of the canals in the Rajasthan Canal System is 9,425 km and that it is more than the length and breadth of the country added together;
- the number of bricks used in the lining and other construction work for the system is 340 crores and these bricks will be enough to tie an 8-m broad band above the equator?

MAJOR RESOURCES OF THE EARTH

Natural resources are generally classified as biotic and abiotic resources. Those consisting of living things such as forests and their products, agricultural crops, animals, fodder, wild and domestic animals, birds, reptiles and fishes are all biotic resources. These are renewable. Abiotic resources consist of non-living things like minerals and fossil-fuels such as coal, petroleum and natural gas; abiotic resources may be considered as mostly non-renewable.

Some of the important commodities comprise

1. AGRICULTURAL CROPS

- a. food crops : wheat, rice, barley, rye, oats and maize.
- b. Beverage crops : tea, coffee, cocoa
- c. Fibre crops : cotton, wool, silk, flax, jute.
- d. Cash crops : sugarcane, tobacco, vegetable oils, spices, rubber.

2. MINERALS

- a. Metallic : iron ore, copper, aluminium, tin, lead, gold, silver.
- b. Non-metallic : coal, mica, manganese, petroleum, sulphur.
- c. Atomic : uranium, thorium.

3. MANUFACTURING INDUSTRIES

- : iron and steel, textiles, jute, chemical, paper, rubber, ship-building

27°C). long rainy season (150 cm).

Soil: Deep, loamy, well-drained, calcareous.

CPC: India, Brazil, Cuba, China, Mexico, Pakistan, Colombia, Australia and South Africa.

Cotton

Climate: Warm (temperature around 25°C), moderate rainfall (110 cm) during growing season, dry during picking.

Soil: Black cotton soil

CPC: USSR, USA, China, India, Pakistan, Turkey, Brazil, Egypt, Mexico, Sudan, Nicaragua, Greece and Guatemala.

Rubber

Climate: Hot (average temperature 27°C) heavy rainfall (200 cm)

Soil: Deep rich.

CPC: Malaysia, Indonesia, Thailand, India, Sri Lanka, Nigeria, Liberia, Vietnam, Brazil and Zaire.

Minerals

(Principal producing countries)

Iron

USSR (leading iron-ore producer), USA, Australia, Canada, Sweden, France, Spain, India, China and Brazil

Copper

USA, Chile, Zambia, Zaire, USSR, Canada, Spain, Mexico, Japan, Australia and India.

Aluminium

Jamaica, Surinam, France, Ghana, Hungary, Australia, USA, Greenland and India

Coal

USA, USSR, China, West Germany, UK, France, Poland, Belgium, Australia and India.

Petroleum

Saudi Arabia, Kuwait, Iran, Iraq, Qatar, UAE, Libya, Algeria, Nigeria, Niger, Egypt, USA, USSR and Indonesia.

Uranium

Zaire, South Africa, USA, Canada, East Germany, Czechoslovakia, USSR and India.

Thorium (from monazite)

India, Brazil and USA.

Manufacturing industries

(Principal producing countries)

Iron & steel

USA, USSR, Japan, West Germany, UK, France and India.

Textiles (cotton)

USA, China, India, Japan, USSR, UK, Taiwan, Canada, Egypt, France and Italy.

Textiles (woollen)

USSR, UK, Japan, Australia, India, France, Poland, Belgium, Czechoslovakia, West Germany and Bulgaria

Jute

India, Bangladesh, UK, West Germany, Italy and Japan.

Chemicals (heavy)

USA, West Germany, UK, USSR, Japan, Canada, Australia and India.

Paper

USA, Canada, Japan, UK, West Germany, Sweden, Norway, Finland, USSR and India.

Rubber

USA, UK, West Germany, France, the Netherlands, Australia, Canada, Brazil, Indonesia and Sri Lanka.

Major crops

(World distribution)

Wheat

Climate: Cool with fair amount of moisture in the beginning, warmth and dryness at the time of ripening and rainfall at intervals. Temperature between 16°C and 27°C; rainfall 50-75 cm.

Soil: Clayey loam.

Fertilisers: Phosphates.

Chief Producing Countries (CPC): USSR, USA, China, India, France, Canada, Australia, Turkey, Italy, Pakistan, West Germany and Argentina.

Rice

Climate: Hot (average temperature 20°C) and wet—rainfall 150-200 cm; soil saturated in water—'root in water, head in hot sun'.

Soil: Rich, muddy.

CPC: China, India, Indonesia, Bangladesh, Thailand, Japan, Burma, Vietnam, South Korea, Brazil, the Philippines and USA.

Tea

Climate: Warm and moist (temperature over 21°C), heavy rain (200 to 250 cm)

Soil: Deep, well-drained as on hill slopes

CPC: India, China, Sri Lanka, USSR, Japan, Kenya, Turkey, Indonesia, Bangladesh, Argentina and Uganda.

Coffee

Climate: Hot and moist (temperature 14°C-26°C), rainfall (175 to 300 cm).

Soil: Humus (rich in iron and potash), well-drained hill slopes.

CPC: Brazil, Colombia, Mexico, Ivory Coast, Uganda, Guatemala, Indonesia, El Salvador and India.

Sugarcane

Climate: Hot (average temperature 21°C to

INDIA

RIVER SYSTEM

The rivers of India are broadly classified into two categories: the Himalayan System and the Deccan System. The Himalayan rivers are the perennial rivers being snow-fed and rain-fed; the

Deccan rivers are seasonal as their flow is dependent mainly on rainfall. See the table below for the salient features of the two river systems:

River	Source	Body of Water into which it falls	General features
A. HIMALAYAN SYSTEM			
Indus	Mount Kailas in Tibet	Arabian Sea	General direction of flow: west and north-west (Punjab, India) south-west (Punjab & Sind, Pakistan); has five major tributaries: Sutlej, Beas, Ravi, Chenab, Jhelum.
Ganga	Rises from the glacier Gangotri in the Himalayas	Bay of Bengal	General direction of flow: west, south-west, east, south-east; flows through U.P. Bihar and Bengal; main tributaries are: Yamuna, Gomti, Ghagra, Gandak, Ram Ganga (all these except Gomti emerge from Himalayas), Sone, Chambal, Betwa, Ken join the Yamuna from the south after flowing through the southern hills; eventually all rivers flow into Ganga.
Brahmaputra	Mansarovar Lake in western Tibet	Bay of Bengal	Flows through Himalayas, turns south-west and then south, joining the eastern-most branch of Ganga—the Padma—both emptying together into Bay of Bengal.
B. DECCAN SYSTEM			
Godavari, Krishna, Cauvery & Pennar	Western Ghats	Bay of Bengal	General direction of flow: east, south-east; Godavari forms the largest river basin in Deccan and the second largest in India; often called 'Dakshina Ganga' or 'Vridha Ganga'; Krishna basin is the third largest in India.

Mahanadi & Damodar	Rise in the north-west of Deccan Plateau	Bay of Bengal	Flow eastwards. Mahanadi forms the fourth largest river basin in India
Narmada & Tapi	Northern-most extremity of Deccan Plateau	Gulf of Cambay in the Arabian Sea	Flow westwards. Narmada has an extensive river basin
Sharavati, Netravati, Bhartapuzha, Periyar and Pamba	Western Ghats	Arabian Sea	Flow westwards. Cross west coast and fall into Arabian Sea. Combined they start rivers with minor basins

CLIMATE

The climate is studied under average weather conditions prevailing from one season to another in the course of a year. The Indian Meteorological Department recognises four seasons: (1) Cold weather season (December-March), (2) Hot weather season (April-May), (3) Rainy season (June-September), (4) Season of retreating south-west monsoon (October-November). The seasonal variations in the weather conditions are produced by a number of factors such as surface distribution of pressure and winds, upper air circulation caused by factors controlling global weather and the inflow of different masses and jet streams, and the inflow of western disturbances and tropical cyclones.

Q. Which are the coldest parts and why?

A. The coldest parts lie in the Trans-Himalayan and Greater Himalayan regions. Dras and Kargil of Ladakh region are the coldest parts where temperature can fall as low as -40°C ; this is due to the combined influence of the distance from the equator and the effect of altitude.

Q. Which are the hottest parts and why?

A. The hottest parts lie in west Rajasthan at Barmer where mercury shoots upto 50°C (122°F) during day time; this is due to the distance from the sea, absence of rainfall, and dry and sandy soil which gets heated intensely.

Q. Which are the wettest and driest parts and why?

A. The wettest part is Cherrapunji in Meghalaya (in fact the place which receives the maximum amount of rainfall in the world is not Cherrapunji but *Mawsyran*, 10 km from Cherrapunji). Here the rainfall is as high as 1,080 cm; this is due to its funnel-shaped location surrounded by the Khasi, Garo and Jaintia hills. The driest part is Jaisalmer in western Rajasthan which receives the minimum amount of rainfall (less than 12 cm); its distance from the Bay of Bengal's monsoon winds, and location in the sub-tropical high pressure belt being the main reasons.

The monsoons

The climate is 'monsoonal', led by two rain bearing winds, the south-west monsoon and the north-east monsoon. The south-west or the summer monsoon, the dominant monsoon in India (85% of the total rain is derived from it), opens on the west coast about the beginning of June (the first rain is known as the *monsoon burst*) and continues till September. The amount of summer rainfall is characterised by a declining trend with increasing distance from the sea; eg. the rainfall decreases westwards in the northern plains—Calcutta receives 119 cm, Patna 105 cm, Allahabad 76 cm, and Delhi 56 cm; Western Ghats, the North-eastern Hills and the Himalayas cause regional variations in the distribution of summer rainfall. The north-east monsoon coming in the wake of the south-west monsoon (November-March) is comparatively a minor monsoon as it is confined to a smaller area of the

country, particularly the north-east. Tamil Nadu's major monsoon is the north-east monsoon from which it receives 45% of its rainfall; the two months—November and December—contribute to 38% of the total rainfall of the southern monsoon.

IRRIGATION

Importance of irrigation. Irrigation or water management is of vital importance for our agricultural economy. Available water supply has to be increased and brought closer to the crops at the proper time and in the right quantity. Rain-fall is not evenly distributed throughout the year; it is also not evenly distributed throughout the country.

Water resources. The resource is assessed as 1.7 km³ has been estimated, but due to the limitations of physical geography, its storage, dependability and quality of it are not adequate to provide irrigation facilities for the entire cultivated area in the country.

Area irrigated. The area irrigated has been progressively extended over the years. In 1951, the total area irrigated was 29 million hectares, and by 1980-82 it had risen to 61.7 million hectares.

Sources of irrigation. The sources of irrigation are major, medium and minor surface sources—mostly canals, and minor water sources—mainly wells and tube-wells. 60% is covered by surface water and 40% by ground water sources.

Q. Punjab and Haryana are pre-eminent positions in regard to irrigation by means of canals and wells. Why?

A. The rainfall in Punjab and Haryana is not only low (less than 55 cm in Amritsar and far less in the southern districts of Punjab and Haryana) but also uncertain and mostly concentrated in one season. There is, thus, a great need for irrigation. The river Indus and its five tributaries which irrigate the Punjab plain are snow-fed and provide water throughout the year for canals; the configuration of these rivers spread out like five fingers of a hand, lends itself to easy inter-linking of these rivers by canals; the soft and even ground and porous soil make for easy digging of canals and sinking of wells for tapping underground water.

Q. In the Deccan the chief means of irrigation is by tanks. Why?

A. In the Deccan the rivers are neither so numerous nor do they rise from snow-covered mountains and are, therefore, waterless in dry seasons. As the ground is also hard, rocky and uneven, wells and canals cannot be easily dug, but tanks can be made by damming the rivers at different places to collect the water for storage and use for irrigation when required.

MULTIPURPOSE SCHEMES

Multipurpose projects aim at optimum development of a river valley in terms of all its resources and needs. They help (a) create maximum storage on a river, (b) secure flood control and prevent soil erosion, (c) provide irrigation not only in dry areas but also in the dry season, (d) generate hydroelectric power, and (e) extend facilities for navigation, fishing and recreation.

Some of the major multipurpose projects are outlined below.

Bhakra Nangal on River Sutlej. **Main features (MF):** (a) Bhakra Dam across the river Sutlej, 518 m long, 226 m high (three times as high as Goutab), highest straight gravity dam in the world. (b) Gobind Sagar Lake behind the dam, stores 73 lakh acres ft of water. (c) Bhakra Main Canal, 173 km long. (d) Nangal Hydel Channel from Nangal to Ropar reservoir, 64 km long, 42.7 m wide and 6.2 m deep. (e) Nangal Dam 11 km down the Bhakra Dam, 291 m long, 29 m high, stores 24,000 acre ft of water. (f) Four power plants—two at Bhakra, one each at Ganguwal and Kotla with total installed capacity of 1,204 Mw. (g) Canal system irrigates 14.8 lakh hectares. (h) The project was dedicated to the nation by Jawaharlal Nehru on Oct 22, 1963. **Beneficiary state(s) (BS):** Punjab, Himachal Pradesh, Haryana, Rajasthan.

Damodar Valley on Damodar. **MF:** (a) A dam each at Tilaiya, Konar, Maithon and Panchet (all in Bihar) with a hydel power station at each location except at Konar. (b) Irrigation barrage at Durgapur (West Bengal), 692 m long, 11.58 m high with 2,495 km of canal system. (c) Thermal power station at Bokaro, Chandrapura and Durgapur. (d) 1,280 km route of double circuit transmission lines, 30 sub-stations and receiving stations. (e) Irrigation potential about 5.15 lakh hectares and power generating capacity 1,181 Mw. **BS:** Bihar, West Bengal.

Hirakud on Mahanadi. **MF:** (a) Dam 4,801.2 m long, 28.9 m high, flanked by 21 km of dykes constructed at Hirakud about 14 km above the town of Sambalpur (Madhya Pradesh) storage capacity 67 lakh acre ft of water. (b) Two power houses at Hirakud and Chipima. (c) Irrigation potential about 2,054 lakh hectares and power generating capacity 270.2 Mw. Dam completed in 1957. **BS:** Orissa.

Tungabhadra on Tungabhadra (tributary of river Krishna). **MF:** (a) Dam at Mallapuram, 2,441 m long, 49.38 m high. (b) Reservoir stores 30 lakh acre ft of water. (c) Two canals on either side which irrigate 8.32 lakh hectares in Andhra Pradesh and Karnataka. (d) Two power stations one each at Mallapuram and Hampi, total power capacity of 99 Mw commissioned. Project completed in 1956. **BS:** Andhra Pradesh, Karnataka.

Mayurakshi on Murali. **MF:** (a) A weir constructed on Mor river at Tipara for storing water. (b) Canals take off from its right and left banks above the weir which irrigate 2.5 lakh hectares of land. (c) Canada dam, 640 m long and 47.24 m high was completed in 1955. (d) The hydroelectric plant produces 4 Mw of power. **BS:** West Bengal.

Nagarjunsagar on Krishna. **MF:** (a) A dam 1,450 m long, 115 m high on river Krishna at Nagarjunsagar (Andhra Pradesh). (b) Two canals on each side of river. (c) Irrigates 32 lakh acres of land. (d) Power generation 75 Mw. The dam has been completed and works on canals underway. **BS:** Andhra Pradesh.

Gandak on Gandak (tributary of Ganga). **MF:** (a) Joint venture of India and Nepal. Project completed in 1977. (b) A barrage 747 m long across river Gandak at Valmikinagar in Bihar. (c) An irrigation potential of 11.30 lakh hectares had been created by 1981-82 in Bihar and UP. (d) Power house with installed capacity of 15 Mw, in Nepal territory. **BS:** Bihar, UP in India; Nepal.

Kosi on Kosi. **MF:** (a) A dam 5 km long across the bed of river Kosi. (b) 120 km long embank-

(c) A canal from Bhumi Nagar with four branches. (d) Production of 90 Mw of hydro-electricity. (e) Project targeted to irrigate 8.73 lakh hectares of land. **BS:** Bihar

Farakka on Ganga. Bhagirathi. **MF:** (a) A barrage across the Ganga at Farakka near the border of West Bengal and Bangladesh. (b) A barrage at Jangipur across the Bhagirathi (the upper part of Hooghly). (c) 39 km long feeder canal at Farakka. (d) Road-cum-rail bridge over the Farakka barrage. Two barrages and bridges completed. Work on the national canal in progress. Basic aim of the project is to preserve and maintain the port of Calcutta and improve the navigability of the Hooghly. **BS:** West Bengal

Beas or Beas-Sutlej Link. **MF:** (a) Beas-Sutlej Link—a dam across river Beas at Pandori near Mandi in Himachal Pradesh; its spare water is carried through channels and tunnels to Sutlej at Slapper (Himachal Pradesh); main function is to augment water resources of Gobind Sagar Lake at Bhakra. (b) Beas Dam at Pong (Himachal Pradesh) 33 m high with installed capacity of four power units of 60 Mw each; principally an irrigation project. (c) Beas transmission system: waters of Beas Dam carried to augment water resources at Hakra Pattan reservoir at the confluence of Sutlej and Beas rivers; will feed 204 km-long Rajasthan Feeder Canal (in Haryana, Punjab and Rajasthan), and 445 km Rajasthan Canal (in Rajasthan). (d) The latter comes under another project known as Rajasthan Canal Project; ultimately the entire project will irrigate an area of 1,254 lakh hectares in the Thar Desert region of Rajasthan. **BS:** Punjab, Haryana, Himachal Pradesh, Rajasthan.

FORESTS

A total area of 75.06m hectares is covered with forest, making a little over 21% of the land area. The National Forest Policy has laid down a target of raising it to 33.3%. Forests check soil erosion on hill slopes in upper catchment areas of rivers which help control floods, increase rainfall and improve local climate, besides yielding such products as timber, wood-fuel and numerous other industrial raw materials.

Types of forests

India has different types of forests falling into five botanical categories. Evergreen, Deciduous, Dry, Hill, Tidal or Littoral.

Evergreen forests are found where rainfall is between 200 and 300 cm (80" and 120") i.e. in the Western Ghats and the sub-Himalayan regions in the east. They provide hard wood like teak, ebony, rosewood and bamboo of all varieties.

Deciduous forests or monsoon forests are found in areas where the rainfall ranges between 150 and 200 cm (60" and 80"). These forests occupy a large part of the Deccan Plateau stretching over the states of Maharashtra, Madhya Pradesh and Karnataka. They provide fine timber such as teak, sal, padauk, sandalwood, redwood, arjun, etc.

Dry forests occur where rainfall is between 75 and 100 cm (30" and 40") which comprise the desert regions of Rajasthan and south Punjab. They consist mostly of shrubs, thickets and stunted trees like jal, kikar, etc.

Hill forests are found in southern India above 3,000 ft and in the Himalayas above 5,000 ft, and include the very best timber such as oak,

chinar, maple, poplars, etc.

Littoral forests occur in the estuaries of great rivers like the Indus, the Ganga and the Mahanadi. Trees in these forests provide good firewood.

Forest products

The major forest products wood, used as timber (e.g. teak, deodar and oak) as fuel including wood for charcoal, and as raw material for wood-based industries like rubber, pine and coconut. Minor products include bamboos and canes, grasses of various kinds, leaves of different trees, medicinal plants, gums, resin and lac.

Forest-based industries

Paper industry depends on raw materials of soft wood, wood pulp, grasses (saba grass) and bamboos. Paper mills have been established at Titaghar and Horigan (West Bengal), Brajpur (Orissa), Lucknow and Saharanpur (UP), Jagadhari (Punjab) and Pune (Maharashtra). Nepanagar in Madhya Pradesh manufactures newsprint.

Gum industry The most important gum-yielding trees are rubber, balsa, gular, salai and shambhu. Karaya is gum from Kino trees, is mixed with resin to thicken it; the variety of gums is exported and brought in exchange from exchange. Lac obtained from psopal and babul trees among others, is used for making old type of gramophone records.

Resins differ from gums in that they are soluble in alcohol. Resin factories have been established at Nahan (Himachal Pradesh), Bareilly (UP) and Hoshiarpur (Punjab). Resin obtained by tapping chir trees is used for making paints and varnishes, grease, boot polish, disinfectant, soap, etc.

Match industry Wood for matchsticks and boxes is usually obtained from bamboos and other soft wood trees like pine. Match industries have been established almost throughout India increasingly as a cottage industry. Match factories are found on a large scale at Kevilpati, Sivakasi, Chingleput (Tamil Nadu), Trichur, Trivandrum (Kerala), Ambamathi, Chanderpur (Maharashtra), Bareilly (UP), Shimoga (Karnataka), Dhubi (Assam), Kota (Rajasthan), Bilaspur (MP).

Sports goods form another important forest based industry in Jullundur (Punjab), Meerut and Moradabad (UP), Kanpur (MP), Pune (Maharashtra), Madras (Tamil Nadu).

Katha industry: Katha is obtained from a plant called khair and is valued as a medicine; some 3,000 tonnes is produced annually in India. Izatnagar in UP and Shivpur in Gwalior are well-known for this industry.

Medicinal plants: Indian forests provide over 20,000 species of medicinal herbs of proven therapeutic value. These are widely used for making drugs mainly under the ayurvedic system. These herbs have given rise to a flourishing cosmetic industry as well.

FISHERIES

India's coastline, of nearly 6,000 km, the existence of a continental shelf, the ocean currents along the coastline, plankton brought down by big rivers flowing in to the sea—all favour the development of fisheries in our country.

Fish production in statistics over the period 1978-81 are shown in the table in the next column.

Marine	lakh tonnes	14.9	14.9	15.5
Inland	..	8.2	8.5	8.7
Total	..	23.1	23.4	24.2

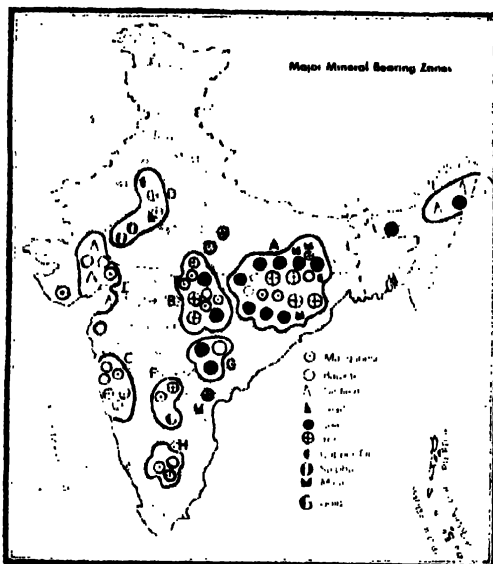
Marine fish resources are vast and are being increasingly exploited as a commercial venture and for export. Main species of marine fish include tuna, sardines, mackerel, Bombay duck, pomfrets, Indian salmon, shrimps, prawns, etc.

The emergence of multipurpose dam lakes in many parts of the country has boosted the development of inland fisheries on a large scale. The main species of inland fish are kalta, rahu, mrigal, and all major Indian carps.

MINERAL RESOURCES

Some noteworthy points about mineral resources are:

1. The known resources are large but insufficient in view of the country's size and population.
2. The available resources are quite unevenly distributed over the country.
3. Sizeable and rich mineralised areas are marked in relatively simpler and at the same time old crystalline rock structures of plateaus and low hills of peninsular India.
4. There is a concentration of rich minerals found in close proximity to each other forming a kind of mineral belt of high economic importance.
5. The country may be divided into nine major mineral bearing zones as shown in the map below.



6. India is rich in certain minerals, self-sufficient in others and quite deficient in some. The country is rich in iron ore of quality; the estimated reserves are about 21,870m metric tonnes or about one-fourth of the world's known deposits; in mica, India is first in production contributing about two-thirds of the total world production; in manganese, it is the third largest producer in the world, the estimated reserves being 180m tonnes; in bauxite, the reserves are of the order of 230m tonnes.
7. India is self-sufficient in antimony, building stones, cement materials, clay, chromite, limestone, dolomite, marble and gold.
8. According to our present knowledge, India is deficient in copper, graphite, lead, mercury, zinc, tin, nickel, petroleum, rock phosphates, sulphur and tungsten. Mineral resources like potassium are totally absent and have to be imported. Pet-

total value of imports, followed by diamonds (uncut) sulphur and rock phosphates.

9. Recent progress in oil prospecting has shown that India has enough oil and natural gas potential and can become self-sufficient in the immediate future if the present tempo of investigation is kept up.

Atomic minerals

Uranium and thorium are available as raw materials for producing nuclear energy. Uranium is mostly found in Bihar, Rajasthan and Tamil Nadu; of note are the uranium deposits at Narwapahar and Turamdih located in the mineralised Singhbhum belt of Bihar. Uranium deposits found in Bodal (Madhya Pradesh) are also being opened up. Thorium reserves are found in the Chhota Nagpur plateau of Bihar and in the form of monazite sands along the coast of Kerala. Thorium and monazite are being increasingly used as nuclear fuel instead of the costly enriched uranium.

Nuclear power stations

Tarapur Atomic Power Station (TAPS) in Maharashtra

Rajasthan Atomic Power Station (RAPS) near Kota, in Rajasthan.

Madras Atomic Power Station (MAPS) near Kalpakkam in Tamil Nadu.

Narora Atomic Power Station (NAPS) in UP

Principal oilfields

Assam : Digboi, Rudrasagar, Baramuri
Gujarat : Ankleshwar, Navgaon, Mohsana, Cambay (gas)

Maharashtra : Bombay High, N. Bassein, S. Bassein

Pondicherry : Porto Novo (oil with gas struck here in 1982)

Oil refineries

Assam : Gauhati, Digboi, Bongaigaon
West Bengal : Haldia
Bihar : Barauni
UP : Mathura (the biggest refinery in the country)

Gujarat : Koyali
Maharashtra : Bombay (two refineries)
Tamil Nadu : Madras

Andhra Pradesh : Vizag
Kerala : Cochín

FERTILISERS

It is now recognised that the three basic inputs for a successful agricultural economy are: irrigation, high yielding variety seeds and fertilisers.

Fertilisers have transformed the entire agricultural scene in India. The introduction and gradual acceptance of chemical fertilisers was symbolic of the people's, particularly the rural population's, first contact with scientific concept of land management. The Indian farmer has traditionally used organic manure like dung, leaf sweepings and compost the result being a very poor yield. Use of chemical fertilisers has not brought in a new dynamism to the country's economy but a social revolution as well by demolishing inhibitions inherited from generation to generation.

INDIA OVERTAKES US

"CHINA AND INDIA, the world's two most populous nations, on an average increased their combined production of cereals at a slightly higher rate than did USA in 1984."

As a fertiliser is a plant food added to the soil other than in the form of farmyard manure.

Soil nutrients

Soil needs three major nutrients: (1) Nitrogen (N), (2) Phosphate (P) and (3) Potassium (K). Nitrogen helps in the *greening* of the plant; phosphate helps in *flowering*; and potassium at the *fruit forming* stage. All crops are therefore given doses of fertilisers at the three stages of growth.

Kinds of fertilisers

Based on the three requirements, the chemical fertilisers produced are: nitrogenous fertilisers (N); phosphatic fertilisers (P); potassic fertilisers (K); complex fertilisers which contain more than one nutrient (N.P.K.) in varying proportions.

Nitrogenous fertilisers are: Urea containing 46% nitrogen; ammonium sulphate containing about 21% nitrogen; calcium ammonium nitrate containing about 20% nitrogen.

Phosphatic fertilisers are: single super phosphate (SSP) triple super phosphate (TSP) P_2O_5 .

Potassic fertiliser is chemically named K_2O .

Complex fertilisers: Several grades of N.P.K. fertilisers, nitro phosphate dia ammonium phosphate.

With an investment of over 1

India is today ranked fourth in the world as far as production of nitrogenous fertilisers is concerned and eighth in respect of phosphatic fertilisers. In Asia, its position is next only to China which is the leading producer of soil nutrients in the continent. Potassic fertilisers are not being produced in India and are totally imported at present.

Fertiliser industry

India's fertiliser industry ranks second after the steel industry in terms of manufactured products. There are 20 companies at present producing chemical fertilisers, nine in the public sector, 10 in the private sector and one in the cooperative sector.

Public sector companies are located at: Sindri (Bihar), 1951; Naya Nangal (Punjab) 1961; Trombay (Maharashtra), 1965; Gorakhpur (UP) 1968; Namrup (Assam) 1968; Durgapur (West Bengal) 1974; Barauni (Bihar) 1976; Telchar (Orissa), Ramagundam (Andhra Pradesh). A project at Korba (Madhya Pradesh) will also be taken up after completion of the projects at Telchar and Ramagundam.

Private sector companies are located at: Madras, Neyveli, Ennore (Tamil Nadu); Alwaye, Cochin (Kerala); Secunderabad (Andhra Pradesh); Baroda (Gujarat); Kota (Rajasthan); Rourkela (Orissa); Varanasi, Kanpur (UP); and Delhi

PRINCIPAL MANUFACTURING REGIONS

Major Regions	Bihar-Bengal industrial belt	Bombay-Pune	Ahmedabad-Varanasi	Madurai-Coimbatore-Bangalore
Main industries	(a) Hooghly side-jute, cotton, electricals, light engineering, chemicals (b) Chhota Nagpur—iron and steel, wire, rolling stock, vehicles	Cotton (over one-third of workers), chemicals, engineering, food processing, printing	Cotton, chemicals, pottery	Cotton, light consumer goods, light engineering
Coal	Damodar Valley (Bihar), West Bengal, Assam, Orissa, Arunachal Pradesh.	Maharashtra, MP	Bihar (recently some oil and gas was struck)	Andhra
Iron ore	Singhbhum (Bihar)			Small iron and steel works at Bhadravati using ores from Bababudhan hills
Power-Hydro-electricity	Damodar Valley project	Important suppliers from Western Ghats	—	Cauvery, Jog, Nilgiri projects
Other raw materials mainly from agriculture	Bengal jute, jute water routes meeting Damodar coal (but much of the best jute area has gone to Bangladesh)	Cotton, ground-nuts on regur soil of plateau to the east	Cotton from surrounding regur soils, salt from salt-pans	Some cotton on Madurai and Coimbatore regur
Chief port	Calcutta	Bombay	Bombay	Madras

Assam valley	Processing of local tea, rice and oil seeds, some petroleum
Darjeeling terrain	Processing of local tea
North Bihar-adjoining	Manufacture of sugar from local sugarcane
UP plains	
Delhi-Meerut	Manufacture of sugar from local sugarcane, some textiles, chemicals engineering.
Indore-Ujjain	Cotton cloth for local markets, handicrafts (patronised by former royal courts).
Nagpur-Wardha	Small textiles, iron foundries, railway and general engineering, glass and pottery
Dharwar-Belgaum	Cotton textiles for local and other markets, railway and general engineering
Godavari-Krishna Delta	Local tobacco, sugarcane, rice and oil, cement, small textiles
Kanpur	Textiles and clothing, large modern tanneries, leather works, shoe factories, all founded on early military needs
Madras	Textiles, light engineering, consumer goods of wide variety
Malabar-Quilon-Trichur	Cashew processing, coconut and oilseeds processing, associated industries (coir manufacture, soap) some textiles, numerous handicrafts in very densely populated coastal tract
Sholapur	Important textiles based on cotton grown on local regur soils and engineering centres

Source: *Economic Geography Of India, NCERT*

LANGUAGES

Distribution pattern of Indian languages

The languages and dialects prevailing in India belong to four language families: Austro family or Nishāda; Sino-Tibetan family or Kirata; Dravidian family or Dravida; Indo-European family or Arya.

There is a Negroid family of languages also but it has only survived in the Andaman Islands and the Andamanese language is spoken by just about 1,000 people.

Geographical distribution of language families

Language family	Regions	Chief languages/Percentage dialects
Austro family	Tribal groups in the Khasi, Jaintia Hills (Meghalaya), Nicobar Islands, Santal Paraganas, Mayurbhanj, Ranchi (Bihar)	Kash, and Monkhmer, Nicobarese, Munda or Kol /1.3
Sino-Tibetan family	Tribal groups in Himalayan and sub-Himalayan regions of north and north west i.e. Ladakh and north east i.e. Sikkim and Arunachal Pradesh, Manipur	Ladakhi, Bhotia, Bodo, Naga, Kuki, chin and Abor, Manipuri belongs to the Tibeto-Burman family and Manipuri is the state language of Manipur /0.7
Dravidian family	Plateau region and adjoining coastal plains of four southern states and tribal groups of central India and Chhota Nagpur Plateau	Telugu, Tamil, Kannada, Malayalam, Kui, Khond, Gondi, Naiki, Koya, Toda, Kota, Kodaga, Kurukh and Malto /24.0
Indo-Aryan family	Kashmir, northern plains, Konkan coast, Gujarat and Maharashtra	Bihari, Punjabi, Sindhi, Rajasthani, Gujarati, Marathi, Assamese, Bengali, Oriya, Pahari and Kashmiri /74.0

TOUCHING BOTTOM



The Gjoa, which pioneered the Northwest Passage in 1906. It was captained by Roald Amundson (Norway), first man to reach the South Pole.

India, with a coastline of over 5,700 km, has 10 major ports which are the direct responsibility of the Indian Government. In geographical order, from the northern-most point on the Arabian seaboard in the west to the northern-most point on the Bay of Bengal coast in the east, these 10 ports are:

Kandla. Gujarat is situated on Kandla creek, a part of the Rann of Kutch. It was declared a major port in 1955 and was completed in 1957. A natural and safe harbour, it serves the 1,600-km coastline between Bombay and Karachi (Pakistan).

Bombay. Maharashtra is a natural deep-water harbour and is India's largest port, nearer to the centre of the country than any other harbour. It handles over 40% of India's trade.

Mormugao. Goa is one of the finest natural ports and an important naval station.

Mangalore. Karnataka is a major port for the state.

Cochin. Kerala is counted as one of the best natural harbours in the east, it is a major naval station and has a large ship-building yard.

Tuticorin. Tamil Nadu is a shallow but big port on the east coast, almost at the tip of the Indian peninsula.

Madras. Tamil Nadu is an artificial harbour, the third largest in India.

Visakhapatnam. Andhra Pradesh is a first class harbour between Madras and Calcutta, it has a big ship-building unit and is a major naval base.

Paradip. Orissa's newly opened port was declared a major port in April 1966.

Calcutta. West Bengal is situated on the slightly gulf some 144 km (90 miles) from the Bay of Bengal, it is only being completely dependent on this ship, at center and near at fixed base according to the tides.

The eleventh Indian port, **Nhava Sheva** across the Bombay harbour, was begun in May 1982 and is likely to become operational by the end of 1987.

The Indian coastline has some 225 intermediate and minor ports on the east and west coasts; these are distributed among states and Union territories as follows:

Karnataka: Karwar, and 19 minor ports.
Tamil Nadu: Cuddalore, Nagapattanam, and seven minor ports.

Maharashtra: Ratnagiri and Redi and 46 minor ports.

Gujarat: Okha, Portbandar, Bhavnagar, Navala, Chembur, Veraval, Boker, Mandla, Sikka and Sorat and 46 minor ports.

Kerala: Alappuzha, Quilon, Kozhikode and

On

Andhra Pradesh: Machilipatnam and Kakinada and five minor ports.

Pondicherry: One minor port only.

Andaman and Nicobar Islands: 15 minor ports.

(NIP) PON MY AGE

The Japanese are now outliving the Icelanders. According to the Japanese Health and Welfare Ministry, average male life expectancy was 74 years and female longevity nearly 80 years.

Practice Tests

In preparing these tests we have tried to visualise the questions you are likely to face in your actual exam. Great care has been taken to frame questions which are of the same standard as those you'll encounter in your exam.

Rating: Evaluate your performance on the basis of the following score-card.

100 questions in 60 minutes	—	Excellent
60 questions in 60 minutes	—	Good
50 questions in 60 minutes	—	Fair
35 questions in 60 minutes	—	Poor

Tips: 1. Do not waste time over questions you are not sure about. 2. Give the problems some thought before choosing the answers. 3. Read the directions carefully before answering the questions. 4. Do not guess the answer.

Geography

FOR UPSC, SSC & BANK EXAMS

To help you improve your Geography score these restructured questions, compiled from GK test papers of various exams like the Civil Services, NDA, CDSE, Assistant's Grade, BSRB and SBI (PO) and SCRA held over the last few years, have been selected especially for you. After having read the extensive notes on the subject, test the amount you've grasped and brush up the ones you've failed to master.

DIRECTIONS: For each question tick mark the choice that best answers the question. Answers are given at the end of this test.

Earth is a/an

- (a) Sphere (b) Spheroid
(c) Oblate spheroid (d) Geroid

Earth's axis is inclined at an angle of

- (a) $66\frac{1}{2}^\circ$ (b) 45°
(c) $23\frac{1}{2}^\circ$ (d) 22°

Earth's motion around its axis is known as

- (a) Revolution
(b) Diurnal movement
(c) Annual movement
(d) Rotation

The rotation and revolution of the earth together with the inclination of its axis causes

- I. Day and night
II. The differing length of daylight at different places on the earth's surface

III. Seasonal changes

- (a) All except I (b) All except II
(c) All except III (d) All the three

Seasons occur because of

- I. The rotation of the earth
II. The revolution of the earth
III. The inclination of the earth's axis
(a) I & II (b) II & III
(c) I & III (d) I, II & III

Coriolis is the force due to the

- (a) Rotation of the earth on its axis
(b) Revolution of the earth round the sun
(c) Force of gravity
(d) Gravitational pull between the sun and the earth

When earth is nearest to the sun, it is said to be in

- (a) Aphelion (b) Perihelion
(c) Equinox (d) Solstice

Summer solstice refers to the

- (a) Day when the sun shines vertically overhead at the equator
(b) Duration of summer season
(c) Position occupied by the earth on Sep 23 along its orbit
(d) Sun as seen at mid-day at the Tropic of Cancer

Winter solstice falls on

- (a) Mar 21 (b) Jun 21
(c) Sep 23 (d) Dec 22

10. Midnight sun occurs due to

- (a) Solar eclipse (b) Lunar eclipse
(c) Inclination of the earth's axis
(d) Magnetic storm

11. The solar system is a

- (a) System of the sun and stars in the heaven
(b) Family of the sun consisting of planets, satellites, comets, the asteroids and meteors, all of which revolve round the sun
(c) Group of fixed stars in the heaven
(d) Family of sun, some stars and the planets, all of which revolve round the sun

12. Small pieces of solid matter which appear in the earth's atmosphere as shooting stars are actually

- (a) Falling stars (b) Comets
(c) Meteors (d) Rotating discs

13. _____ is the largest planet in the solar system.

- (a) Earth (b) Uranus
(c) Jupiter (d) Neptune

14. New moon is visible when

- (a) The moon is between the earth and sun
(b) The earth is between the moon and sun
(c) One-half of the circular disc is seen
(d) Three-quarters of the circular disc is seen

15. Companion body to a planet round which it revolves is called

- (a) Planetoid (b) Asteroid
(c) Meteorite (d) Satellite

16. Lunar eclipse occurs when

- (a) The moon passes between the sun and earth
(b) The earth comes in between the sun and moon
(c) The sun's shadow falls on the moon
(d) There is partial or complete obstruction of the moon's surface by any planet

17. Solar eclipse occurs on a

- (a) New moon day
(b) Full moon day
(c) Half moon day
(d) Midway between full moon and half moon days

18. Prime Meridian is

- (a) The central meridian in a country
(b) The 0° meridian passing through Greenwich
(c) A meridian corresponding to 90°E meridian
(d) A 180° meridian east of the equator

19. The local time at longitude in India is known as the Indian Standard Time.

- (a) 0° (b) $81\frac{1}{2}^\circ\text{E}$
(c) 90°E (d) 180°E

20. When a traveller going east crosses the International Date Line, he will have to adjust his calendar date by

- (a) Adding one full day to it (example: changing 6th to 7th)

- (b) Subtracting one full day from it (example: changing 6th to 5th)
(c) Adding two full days to it (example: changing 6th to 8th)
(d) Subtracting two full days from it (example: changing 6th to 4th)
21. Igneous rocks originated from
(a) Clay (b) Mud
(c) Magma (d) Silica
22. Lithosphere refers to the
(a) Land surface of the earth
(b) Interior of the earth
(c) Outer ring of the earth which is made up of solid rocks
(d) Intermediate layer between solid crust and inner core
23. The world's continents are mainly composed of
(a) Sial (b) Sima
(c) Core (d) Mantle
24. At the earth's centre, the temperature is very high, yet, the core is not in liquid state because (of) the
(a) Great pressure raising the melting point of rocks
(b) Hardness of the core
(c) Core is not a conductor of heat
(d) Core has a high melting point
25. The most common igneous rock is
(a) Sandstone (b) Limestone
(c) Granite (d) Basalt
26. Metamorphic rocks are produced by
(a) Solidification of molten magma
(b) Changes in igneous rocks
(c) Changes in igneous and sedimentary rocks
(d) Compression of sand, silt and clay particles
27. The highlands and lowlands of the earth are said to be in a state of balance or equilibrium due to difference in the densities of their respective rock materials. This state of balance is called
(a) Tension (b) Compression
(c) Isostasy
(d) Continental drift
28. Judge the **wrong** statement below.
(a) Sedimentary rocks are found in layers
(b) Igneous rocks contain most of the world's mineral wealth
(c) Large crystals are found in igneous rocks
(d) Metamorphic rocks are generally very hard rocks
29. Of the total area of the earth's surface, water occupies about _____ of it.
(a) 50% (b) 60%
(c) 70% (d) 80%
30. Weathering is a process concerned with the
(a) Wearing away of the land surface
(b) Loosening and breaking down of rocks
(c) Transportation of weathered material
(d) Sculpturing of land surface
31. _____ must be present for temperature changes to be an effective agent of mechanical weathering.
(a) Air (b) Moisture
(c) Dust particles (d) Warmth
32. Chemical weathering involves
(a) Disintegration of rocks without any change in their chemical composition
(b) Chemical interaction of oxygen, carbon dioxide or water with minerals in rocks
(c) Removal of soil by rain
(d) Removal of soil by chemical action
33. The removal of top soil by wind or rain is termed as
(a) Denudation
(b) Soil erosion
(c) Soil wash
(d) Deforestation
34. Laterite soils are found chiefly in _____ regions.
(a) Tropical
(b) Sub-tropical
(c) Humid tropical
(d) Temperate
35. _____ is the most productive soil in the world.
(a) Green soil (b) Black soil
(c) Red soil (d) Laterite
36. The term artesian is derived from Artois which is found in
(a) Australia (b) England
(c) France (d) New Zealand
37. A well differs from a spring in that it is
(a) Deeper (b) Shallow
(c) Produced by nature
(d) Produced by man
38. The amount of water stored underground in a particular area depends upon (all) the
(a) Amount of rainfall
(b) Rate of evaporation
(c) Steepness of the slope
(d) Three
39. The last Ice Age began about _____ m years ago.
(a) 1 (b) 2
(c) 3 (d) 4
40. Spring tides occur twice a month at
(a) New moon or full moon
(b) First quarter and new moon
(c) Full moon and the last quarter
(d) The first and third quarters of the moon
41. Tick mark the **wrong** statement(s).
(a) Ocean currents are produced by the difference in the density of seawater at different depths
(b) The direction of ocean currents is influenced by the shape and position of the coast
(c) Winds do not play any part in the circulation of ocean currents
(d) Ocean currents modify the climate of the coastal regions along which they flow
42. When warm and cold currents meet, _____ is/are formed.
(a) Clouds (b) Rain
(c) Fog (d) Frost
43. _____ chiefly constitute the atmosphere.
(a) Oxygen and hydrogen
(b) Oxygen and nitrogen
(c) Oxygen and carbon dioxide
(d) Oxygen and helium
44. _____ is the lowest layer in the atmosphere.
(a) Stratosphere (b) Troposphere
(c) Mesosphere (d) Hydrosphere
45. Judge the **wrong** statement below
(a) Atmospheric pressure decreases with increasing latitude
(b) It increases when temperature decreases
(c) It is shown on maps by an imaginary line called isotherm
(d) It is measured by an instrument called barometer
46. Imaginary lines on maps joining places which have equal depth or rainfall over a certain period are known as
(a) Isotherms (b) Isobars
(c) Isohyets (d) Isobaths
47. Land and sea breezes are caused by unequal
(a) Pressure
(b) Temperature
(c) Heating capacities of land and water
(d) Distribution of heat over land and water
48. Trade Winds are so named because they
(a) Encourage trade
(b) Blow persistently over a trodden path, especially over the ocean
(c) Followed trading routes in the days of the sailing ships
(d) Blow from the coasts of trading nations
49. Constant winds which blow from the south-west in the Northern Hemisphere and north-west in the Southern Hemisphere towards the poles are called
(a) Polar Winds
(b) North Winds
(c) Westerlies
(d) Easterlies
50. Torrid Zone is the area
(a) Between the equator and the Tropic of Cancer
(b) Between the equator and the Tropic of Capricorn
(c) On the equator
(d) Between the Tropic of Cancer and the Tropic of Capricorn on both sides of the equator
51. Tropical revolving storms which occur in the West Indies are called
(a) Tornados
(b) Typhoons
(c) Willy willys

52. _____ is not a form of precipitation.
 (a) Fog (b) Mist
 (c) Dew (d) Chinook
53. Actual amount of moisture contained in the air is known as
 (a) Absolute humidity
 (b) Relative humidity
 (c) Moisture content
 (d) Saturation point
54. The line of separation at the earth's surface between cold and warm air masses is called a
 (a) Front (b) Boundary
 (c) Device (d) Ridge
55. The Mediterranean climate is characterised by
 (a) Hot and wet seasons all the year round
 (b) A hot dry season followed by a hot and wet season
 (c) Hot season throughout the year with rain in summer
 (d) A hot dry summer and mild wet winter
56. The Indian monsoon climate is marked by
 (a) A cool dry season
 (b) A hot dry season
 (c) A hot wet season
 (d) All the three
57. Which of the following are/is characteristic(s) of monsoon rains?
 (a) They break out suddenly
 (b) Occur in cool season
 (c) Are unreliable
 (d) Are variable
 (e) All except (b)
58. Richter Scale is used to register the intensity of
 (a) Wind speed
 (b) Ocean currents
 (c) Earth's rotation
 (d) Earthquakes
59. A volcano is described as _____ when no eruption has happened within recorded times.
 (a) Active (b) Inactive
 (c) Dormant (d) Extinct
60. Air pressure is measured by a/an
 (a) Thermometer
 (b) Barometer
 (c) Hygrometer
 (d) Anemometer
61. The seven continents in the order of size are
 (a) Asia, North America, South America, Africa, Australia, Antarctica, Europe
 (b) Asia, Africa, North America, South America, Europe, Australia, Antarctica
 (c) Asia, Africa, North America, South America, Antarctica, Europe, Australia
 (d) Asia, Africa, North America, South America, Australia, Europe, Antarctica
62. _____ in order of size are
 (a) China, India, Indonesia and Japan
 (b) China, India, the USSR and the US
 (c) China, Japan, India and Indonesia
 (d) China, India, the USSR and Japan
63. The highest point in Africa is
 (a) Aconcagua
 (b) Elbrus
 (c) Kilimanjaro
 (d) McKinley
64. Tick mark the incorrect pair.

Country	Capital
(a) Ghana	— Accra
(b) Cuba	— Havana
(c) Brazil	— Buenos Aires
(d) Vietnam	— Hanoi
65. Tick mark the incorrect pair.

Country	Capital
(a) Kenya	— Smiling
(b) South Africa	— Pound
(c) China	— Yuan
(d) USSR	— Rouble
66. The national language of the Netherlands is
 (a) German (b) French
 (c) Dutch (d) English
67. Area-wise, _____ Ocean is the largest.
 (a) Atlantic (b) Arctic
 (c) Indian (d) Pacific
68. The longest river in Asia is
 (a) Indus (b) Mekong
 (c) Yangtze (d) Yenisey
69. Lake Eyre is located in
 (a) Ireland (b) Australia
 (c) The US (d) Canada
70. The highest Indian mountain is
 (a) Kanchenjunga
 (b) K2
 (c) Nanga Parbat
 (d) Nanda Devi
71. The Third World countries refer to
 (a) Developed countries
 (b) Underdeveloped countries
 (c) Under-developed countries
 (d) Developing countries
72. The Suez Canal connects
 (a) The Atlantic and Pacific oceans
 (b) The Pacific and Indian oceans
 (c) The Mediterranean Sea and the Indian Ocean
 (d) The Mediterranean and Red seas
73. _____ is not included in West Asia.
 (a) Afghanistan
 (b) Israel
 (c) Iraq
 (d) Egypt
74. The world's largest reserves of petroleum are located in
 (a) The US
 (b) The USSR
 (c) Saudi Arabia
 (d) Venezuela
75. The largest reserves of thorium are considered to be in
 (a) USSR (b) USA
 (c) Brazil (d) India
76. _____ the world is
 (a) USA (b) USSR
 (c) Egypt (d) India
77. The biggest producer of tea is
 (a) China (b) India
 (c) Indonesia (d) Sri Lanka
78. Which of the following 'country-commodity pairs is wrong?
 (a) Brazil — coffee
 (b) Burma — rice
 (c) Cuba — sugar
 (d) China — copper
79. A light year is
 (a) A period of 3560 days
 (b) A year in which production of electricity is maximum
 (c) A year in which production of electricity is minimum
 (d) The distance traversed by light in one mean solar year
80. The Steppes are the temperate grasslands of
 (a) Europe and Asia
 (b) North America
 (c) South America
 (d) Asia
81. _____ needs water-logging for cultivation.
 (a) Corn (b) Wheat
 (c) Rice (d) Sugarcane
82. Vegetable and fruit cultivation is called
 (a) Horticulture
 (b) Sericulture
 (c) Double cropping
 (d) Subsistence farming
83. Brazil is a well-known _____ producer.
 (a) Tobacco
 (b) Tea
 (c) Coffee
 (d) Sugarcane
84. _____ does not produce olives.
 (a) Spain (b) Poland
 (c) France (d) Italy
85. Silkworm feeds on _____ leaves.
 (a) Banana (b) Guava
 (c) Mulberry (d) Apple
86. _____ is/are more important for industrial development.
 (a) Production
 (b) Market
 (c) Raw materials
 (d) Ports
87. _____ has the highest industrial value.
 (a) Anthracite
 (b) Bituminous
 (c) Lignite
 (d) Peat
88. _____ serves as a collecting and distributing centre for its hinterland.
 (a) Outport
 (b) Packet station
 (c) Entrepot
 (d) Port of call
89. The degree of urbanisation of a country refers to (the)
 (a) Rate of industrialisation
 (b) 1% of population living in the

- (c) Density of population in the cities
(d) Size of the cities.
90. A millionaire city is one in which
(a) There are many millionaires
(b) The public services are of the highest order
(c) The population exceeds 1 m
(d) Millionaires like to live
91. From north to south, India measures
(a) 2,900 km (b) 3,000 km
(c) 3,050 km (d) 3,200 km
92. India's coastline and land frontiers measure _____ respectively.
(a) 5,500 km and 15,200 km
(b) 5,700 km and 15,000 km
(c) 5,700 km and 15,200 km
(d) 6,000 km and 15,000 km
93. _____ have common natural frontiers with India.
(a) China, Burma and Afghanistan
(b) Afghanistan, Nepal and Burma
(c) China, Burma and Nepal
(d) China, Pakistan and Bangladesh
94. India has _____ political states.
(a) 21 (b) 22
(c) 24 (d) 26
95. _____ is the biggest state.
(a) Andhra Pradesh
(b) Madhya Pradesh
(c) UP
(d) J & K
96. _____ became a state of the Indian Union in 1975.
(a) Arunachal Pradesh
(b) Manipur
(c) Meghalaya
(d) Sikkim
97. _____ is the smallest Union territory.
(a) Pondicherry
(b) Lakshadweep
(c) Andaman & Nicobar Islands
(d) Goa, Daman & Diu
98. _____ has a common boundary with the largest number of states.
(a) Andhra Pradesh
(b) Karnataka
(c) UP
(d) Madhya Pradesh
99. _____ are the oldest mountain system.
(a) Himalayas
(b) Western Ghats
(c) Aravallis
(d) Satpura Ranges
100. Western Ghats are also called
(a) Ajanta Hills
(b) Sahayadai Hills
(c) Sevaroy Hills
(d) Loshar Hills
101. _____ is the second-highest mountain-peak in India.
(a) K2
(b) Kanchenjunga
(c) Nanga Parbat
(d) Nanda Devi
102. Himalayan rivers are perennial. Why?
(a) There are heavy rains in the upper reaches of the river
(b) There is heavy rainfall throughout the year in the course of these rivers
(c) The snow melting in the upper Himalayas during spring and summer seasons provides them enough water during the dry season
(d) There is a constant supply of water from the underground water table
103. The longest river in India is
(a) Indus (b) Ganges
(c) Brahmaputra (d) Mahanadi
104. Sone is the tributary of the
(a) Ganges (b) Yamuna
(c) Narmada (d) Sutlej
105. The rivers of the Deccan System which flow into the Arabian Sea are
(a) Narmada, Tapti, Mahanadi and Pennar
(b) Periyar, Sharavati, Narmada and Tapti
(c) Mahanadi, Godavari, Tapti and Narmada
(d) Narmada, Damodar, Tapti and Sharavati
106. _____ is referred to as "Dakshin Ganga"?
(a) Krishna (b) Godavari
(c) Mahanadi (d) Tapti
107. Tick mark the incorrect statement (s).
(a) All the tributaries of the Ganges flow from the Himalayas
(b) Ganges and Brahmaputra flow from two drainage systems
(c) Ganges breaks off into numerous tributaries before joining the sea
(d) Brahmaputra is the largest tributary of the Ganges
108. A multipurpose river valley project
(a) Helps in checking floods
(b) Helps in conservation of water and soil
(c) Helps in irrigation and development of hydroelectricity
(d) Serves all the above purposes
109. Tick mark the incorrect pair (s).

Project	Location
(a) Bhakra Nangal	— Punjab
(b) Damodar Valley	— West Bengal & Bihar
(c) Hirakud	— Orissa
(d) Chambal Valley	— Rajasthan & Haryana
110. Rihand Valley Project is located in
(a) UP
(b) Madhya Pradesh
(c) Bihar
(d) Rajasthan
111. _____ % of land is under forest in India.
(a) 11 (b) 22
(c) 25 (d) 30
112. Deciduous forests are found in areas where the rainfall ranges between
(a) 40" (100 cm) and 60" (150 cm)
(b) 60" (150 cm) and 80" (200 cm)
(c) 80" (200 cm) and 100" (250 cm)
(d) 100" (250 cm) and 120" (300 cm)
113. The most important commercial forests in India are the
(a) Tropical evergreen forests
(b) Tropical deciduous forests
(c) Coniferous forests
(d) Tropical arid forests
114. _____ is the most fertile soil in India.
(a) Regur
(b) Alluvial
(c) Laterite
(d) Red soil
115. Laterite soil in India is found in the
(a) Western Ghats
(b) Ganges Valley
(c) Malwa Plateau
(d) Punjab Plain
116. Black soil is best suited for _____ cultivation.
(a) Sugarcane (b) Maize
(c) Jute (d) Cotton
117. Black soil covers the largest portion of
(a) Karnataka (b) Kerala
(c) Maharashtra (d) Tamil Nadu
118. Kharif crops are raised during
(a) Spring (b) Summer
(c) Autumn (d) Winter
119. Select the incorrect statement(s).
(a) Kharif season begins with the onset of monsoons and the crops are harvested in winter
(b) Rabi season begins in autumn after the rains and the crops are harvested in late spring
(c) Kharif season begins with the onset of monsoons and the crops are harvested in late spring
(d) Important kharif crops are rice, millet, maize, jute and cotton; important rabi crops are wheat, gram, barley and linseed
120. Wheat is the leading crop of
(a) Andhra Pradesh
(b) Bihar
(c) Punjab
(d) West Bengal
121. Agriculture in India accounts for about _____ % of the national income.
(a) 75 (b) 66
(c) 48 (d) 35
122. _____ is the leading food crop of India.
(a) Rice
(b) Wheat
(c) Maize
(d) Millet
123. The favourable climatic conditions for the cultivation of rice are
(a) Rainfall below 100 cm, temperature below 25°C
(b) Rainfall above 100 cm, temperature above 25°C
(c) Rainfall below 100 cm, tempera-

ERRATA

In the GK paper for SBI (PO), NDA and CDS exams (Nov '84), the answers to Qs. 28, 30 and 39 should read as (d), (a) and (c) instead of (a), (c) and (d).

temperature below 100°C, temperature above 30°C

124. The principal wheat-producing states of India are
 (a) Punjab, Haryana and UP
 (b) Punjab, Haryana and Rajasthan
 (c) Punjab, Haryana and Madhya Pradesh
 (d) Haryana, UP and Madhya Pradesh
125. Jute is grown in
 (a) Bihar and Andhra Pradesh
 (b) West Bengal and Assam
 (c) Kerala and Tamil Nadu
 (d) West Bengal and Tamil Nadu
126. _____ is the largest producer of rubber in India.
 (a) Andhra Pradesh
 (b) Karnataka
 (c) Kerala
 (d) Tamil Nadu
127. The important Indian cash crops are
 (a) Tea, coffee, cotton, and sugarcane
 (b) Tea, cotton, sugarcane and tobacco
 (c) Cotton, sugarcane, tobacco and oilseeds
 (d) Tea, cotton, sugarcane and oilseeds
128. India earns foreign exchange by _____ exports.
 (a) Coffee
 (b) Cotton
 (c) Jute
 (d) Tea
129. India is the world's largest producer in all the following agricultural commodities except
 (a) Cotton (b) Jute
 (c) Oilseeds (d) Sugarcane
130. India has about _____% of the world's cattle population.
 (a) 50 (b) 40
 (c) 30 (d) 20
131. The largest number of cattle in India are found in
 (a) Andhra Pradesh
 (b) Bihar
 (c) Gujarat
 (d) UP
132. Which of the following high milk-yielding breeds of buffaloes from Pakistan are popular in India?

133. 'Op Flood' refers to
 (a) Green Revolution
 (b) Control of floods
 (c) Increase in milk production
 (d) Increased production of consumer goods
134. _____ help in the greening process of crops.
 (a) Nitrogenous fertilisers
 (b) Phosphatic fertilisers
 (c) Potassic fertilisers
 (d) None of the above
135. India ranks _____ in the world in the production of nitrogenous fertilisers.
 (a) 1st (b) 2nd
 (c) 3rd (d) 4th
136. The biggest fertiliser manufacturing company in India is
 (a) Fertiliser Product, Naya Nangal
 (b) Rourkela Fertiliser Project, Rourkela
 (c) Fertiliser and Chemical Ltd Co, Sindri
 (d) Trombay Fertiliser Organisation, Trombay
137. _____ fertiliser plant is in the private sector.
 (a) Talcher (b) Nangal
 (c) Kota (d) Barauni
138. Coal resources in India are largely concentrated in
 (a) Damodar Valley
 (b) Godavari Valley
 (c) Mahanadi Valley
 (d) Sone Valley
139. India ranks first in _____ production.
 (a) Manganese
 (b) Mica
 (c) Iron ore
 (d) Bauxite
140. Tick mark the incorrect pair.
Oil Refinery Location
 (a) Barauni—Bihar
 (b) Bongaigaon—Assam
 (c) Haldia—West Bengal
 (d) Koyali—Maharashtra
141. The largest deposits of uranium are found in
 (a) Bihar
 (b) Kerala
 (c) Maharashtra
 (d) Andhra Pradesh

- (a) Bihar
 (b) Kerala
 (c) Madhya Pradesh
 (d) Rajasthan
143. Choose the incorrect pair.
Steel Plants Location
 (a) Tata Iron & Steel Co — Jamshedpur (Bihar)
 (b) Hindustan Steel Ltd — Bhilai (Madhya Pradesh)
 (c) Hindustan Steel Ltd — Durgapur (West Bengal)
 (d) Hindustan Steel Ltd — Bhadravati (Karnataka)
144. Select the incorrect pair.
Industry Location
 (a) Antibiotic — Rishikesh
 (b) Cement — Katni
 (c) Cotton — Ahmedabad
 (d) Ship-building — Calcutta
145. Nepa Nagar newsprint factory is located in
 (a) Assam
 (b) Bihar
 (c) Madhya Pradesh
 (d) West Bengal
146. In India, the maximum number of workers are employed in the _____ industry.
 (a) Iron and steel
 (b) Jute
 (c) Sugar (d) Textile
147. Select the incorrect pair.
Port Location
 (a) Bhavnagar — Gujarat
 (b) Kandla — Maharashtra
 (c) Marmugao — Goa
 (d) Mangalore — Karnataka
148. Nhava Sheva, the 11th major port constituted in India in May '82, is in
 (a) Kerala
 (b) Maharashtra
 (c) Andhra Pradesh
 (d) Orissa
149. India's population according to the 1981 census is _____ crores.
 (a) 58
 (b) 68
 (c) 72
 (d) 81

R.L.M.

Answers

1. d	2. a	3. d	4. d	5. b	6. a	73. d	74. c	75. d	76. a	77. b	78. d
7. b	8. a	9. d	10. c	11. b	12. c	79. d	80. a	81. c	82. a	83. c	84. b
13. c	14. a	15. d	16. b	17. a	18. b	85. c	86. b	87. b	88. c	89. b	90. c
19. b	20. b	21. c	22. c	23. a	24. a	91. d	92. c	93. c	94. b	95. b	96. d
25. c	26. c	27. c	28. b	29. c	30. b	97. b	98. d	99. c	100. b	101. b	102. c
31. b	32. b	33. b	34. c	35. b	36. c	103. b	104. a	105. b	106. b	107. d	108. d
37. d	38. d	39. d	40. a	41. c	42. c	109. d	110. a	111. b	112. b	113. b	114. b
43. b	44. b	45. c	46. c	47. c	48. a	115. a	116. d	117. c	118. b	119. a	120. c
49. c	50. d	51. d	52. d	53. a	54. a	121. c	122. b	123. b	124. a	125. b	126. c
55. d	56. d	57. e	58. d	59. d	60. b	127. d	128. d	129. b	130. d	131. d	132. d
61. c	62. b	63. c	64. c	65. b	66. c	133. c	134. a	135. d	136. c	137. c	138. a
67. d	68. c	69. b	70. b	71. d	72. d	139. b	140. d	141. a	142. b	143. d	144. d
						145. c	146. d	147. b	148. b	149. b	

NEWS CAPSULE

AWARDED

The Soviet Land Nehru Awards for 1984 carrying a cash prize of Rs 15,000 and a two-week trip to the Soviet Union to: Godawari Parulekar, a social worker, for her work among adivasis and a literary contribution in Marathi, *Manus Gemwha Jaga Hote* (When The Man Wakes); Subhash Mukhopadhyay, a poet, for his political works dedicated to peace and Indo-Soviet friendship; and the Jawaharlal Nehru University (JNU) for establishing the Centre of Russian Studies and Soviet and East European Studies.

The first **Indira Priyadarshini Award** to Hindi poet and critic Shrikant Verma for promoting the programmes and ideals of Mrs Gandhi. The award carries a prize of Rs 11,000 and a plaque.

The Uttar Pradesh Lalit Kala Akademi Awards of Rs 10,000 to Rameshwar Singh of Udaipur, Sharad Pande of Lucknow and Vidya Sagar of Jaipur for printing; Srikanth of Lucknow for sculpture; and Vijai Singh of Varanasi for drawing.

The Golden Hugo Award at the International Film Festival in Chicago to *Khandhar*, a film by Mrinal Sen.

The Soviet Order Of People Friendship to Svyatoslav Rensch, a noted Indian artist, for his great contribution to the development and consolidation of friendship between India and the Soviet Union.

The Goncourt Prize, one of France's highest literary awards, to Marguerite Duras, 70, for her novel *L'Amant* (The Lover), an autobiographical story of an affair between a young French girl and a wealthy Chinese in French-ruled Indo-China.

The 1984 **Jawaharlal Nehru Award for International Understanding** to Indira Gandhi. The Rs 2.5 lakh annual prize, instituted in 1964 by the Indian Council of Cultural Relations (ICCR), is given for outstanding contribution to international understanding, goodwill and friendship among the people of the world.

The annual **Borlaug Award** for 1983 to Dr V.L. Chopra, Professor at the Indian Agricultural Research Institute (IARI), New Delhi, for his outstanding research and service to agriculture. Dr Chopra has made significant contribution to the knowledge of genetics of micro-organisms and rust-resistance in wheat.

The John C. Phillips Medal to Indira Gandhi for her "great influence on world conservation". The medal is instituted by the International Union for Conservation of Nature (IUCN).

The 1984 **Third World Prize** to former West German Chancellor Willy Brandt, for his outstanding contribution to Third World development in economic and political fields. The annual prize is awarded by the Third World foundation to persons or institutions for notable service in the economic, social, political or scientific fields of the developing world. The prize carries a cash award of \$1,00,000.

The 1983-84 **National Family Welfare Awards** have gone to Maharashtra, Punjab, Assam, HP and Pondicherry. The prizes were given for excellence in performance in the field of

family planning including the percentage of targets achieved during the year in the number of sterilisations.

APPOINTED

M.M.K. Wali, Union Home Secretary, as the Lt Governor of Delhi in place of P.G. Gavai who "proceeded on leave". Wali's appointment followed the large-scale violence in Delhi which the Gavai administration failed to control. About 900 people were killed in Delhi in the violence after the assassination of Mrs Gandhi.

M.P. Thakkar, 61, a senior judge of the Supreme Court, to investigate the events and circumstances of Mrs Gandhi's assassination. Thakkar's appointment followed a Cabinet decision to entrust the investigation to a single-judge commission.

S. Anand Ram, Director-General of the Central Industrial Security Force, to lead an investigation into the assassination of Mrs Gandhi. There will, however, be no duplication in the work of the Thakkar Commission and the Anand Ram team.

K.P.S. Menon, Indian Ambassador to Japan, as Ambassador to China in succession to A.P. Venkateswaran.

Virendra Prakash as Chief Secretary of Delhi Administration, replacing S.C. Vajpayee who was acting as Chief Secretary in place of R.M. Agarwal. Prakash earlier held the post of Joint Secretary in the Pay Commission.

EDUCATION

Schools of aesthetics and arts at JNU: The UGC has approved the setting up of Schools of Arts and Aesthetics and Physical Sciences in the Jawaharlal Nehru University (JNU). The School of Arts and Aesthetics will impart education in the principles, practice and history of drama, music, dance, film, sculpture and graphics. The School of Physical Sciences will provide Physics, Chemistry and Maths under a common umbrella.

SCIENCE

A major step towards fighting infertility: An American reproductive microsurgeon has transplanted for the first time an ovary and a fallopian tube from a woman to her identical twin sister. Dr Sherman Silber, noted for performing the first microsurgical vasectomy reversal in 1975 and the first testicle transplant in 1977, operated

SUCCESSFUL INDIAN OF '84

Readers, write in whom you think fills the above bill. Only:

- ☐ The person must be an Indian citizen;
- ☐ Must not be a politician;
- ☐ Must have achieved something in 1984 which has made every Indian proud;
- ☐ Must have risen to the top.

Send in your nomination latest by January 25 on a postcard with your name, address and age. Also indicate in four lines the reason for your nomination. The first 25 best nominations have a attractive but surprise gift waiting

on 28-year-old twin sisters who wanted to become pregnant. One wished to reverse a tubal sterilisation and the other had lost her tubes and ovaries during an infection. The surgeon reconnected one of the donor's tubes to the miniscule opening in her uterus, then removed her other tube and ovary and implanted them in her sister. The donor is now pregnant, while her sister has begun to produce estrogen, showing that transplanted ovary and fallopian tubes are intact.

Ariane-3 launched: The European Space Agency on Nov 9 put into space an Ariane-3 rocket, carrying two commercial satellites, from the space centre in Kourou, French Guiana. The launching was the 11th of an Ariane rocket and the third commercial one.

Telemedicine: Experiments conducted jointly by the Space Applications Centre in Ahmedabad and a TV studio have shown it is possible for doctors to instruct patients 1,000 kms away through a slow-scan TV. The experiments showed that the Satellite Communication Channel can accurately transmit clinical data from patients and get back prescriptions. Two-way audio-video channels were set up and special stethoscopes for transmitting sounds were used, providing instant communication via satellite. Telemedicine, as it is called, was first tried out in India 10 years ago. It offers an alternate way of providing medical care beyond the reach of most people.

Heart-liver patient: A two-year-old girl on Nov 9 became the world's second simultaneous heart-liver patient. Kellie Kochran of Birmingham, USA, was then given a second heart transplant after her first new heart failed to pump properly. Kellie, however, died on Nov 13 when her new liver failed.

NASA for more cooperative civilian space programmes: A US Congressional study says NASA should establish more cooperative civilian space programmes with other nations, including the Soviet Union. Such programmes could save taxpayers billions of dollars. The study characterises the US goal in space as shortsighted and narrow, reflecting the views only of the science and technology communities and not of the general public which pays for the NASA projects. The study added that the US and the Soviet Union could explore a broad range of space-related activity and called upon the US to negotiate a major international space station programme.

Surgery to correct nearsightedness by making tiny slices in the cornea of the eye, called radial keratotomy, improved the vision of all 435 people involved in a US Government study. Researchers, however, say it is difficult to predict which patients would benefit most from the operation, the variable outcome being one of the major problems facing surgeons. Nearsightedness is caused by a misshapen cornea, the clear front portion of the eye. Some doctors fear the procedure of radial keratotomy could lead to eye infections, cataract or blindness but the recent study revealed minimum complications.

The American space shuttle Discovery returned to earth on Nov 16 after successfully completing history's first space salvage operation. During the journey of 5.8m kms, astronauts

Spacecrafts: Two communication satellites that were lost in space after being launched on an earlier mission. They also released two other satellites. Never before had a human being latched on to an orbiting satellite nor had one been retrieved for return to earth to be repaired and launched again. Financing the historic mission was the insurance company, Lloyds of London, who underwrote the two satellites—*Palapa B2* and *Urestar-6*.

Baby with baboon's heart dies: Baby Fae, a month-old infant who received a baboon's heart to replace her own congenitally deformed one, died on Nov 15. The infant, who received the heart in an unprecedented operation on Oct 26 in Loma Linda (California), lived longer than any other person with an animal heart. Only four other times had animal hearts been implanted in humans and never in an infant. The longest-lived previous recipient was 59-year-old Benjamin Fortes of South Africa who lived three and a half days after he received a chimpanzee's heart in a 1977 operation by Dr Christian Bernard.

New electronic control system: The public sector Instrumentation Ltd at Kota has set up a new project to make an advanced electronic microprocessor-based control system, Conto-nic-3, in technical collaboration with Haftmann & Braun of West Germany.

Veha probes to be launched: Two Soviet inter-planetary Veha (called after two initial symbols of the words Venus and Halley) probes will be launched to make a unique scientific test on the Earth-Venus-Halley's comet route.

Artificial heart transplant: At the Humara Hospital, Audobon, the swollen diseased heart of William J. Schroeder was cut from his chest and replaced with a pulsating assembly of plastic, making him the world's second recipient of a permanent artificial heart.

HEALTH

Cigarette smoking causes a disease that weakens the heart's ability to pump blood and kills about 10,000 people annually, according to a report by the medical college of Wisconsin, USA. Researchers speculate nicotine or carbon monoxide in the smoke somehow poisons the heart and causes the disease, called cardiomyopathy. Another research has shown smokers are two to three times more likely to die from heart attacks, which occur when the heart's blood supply is temporarily blocked. The damage from cardiomyopathy is spread throughout the heart which does not pump strongly enough to circulate blood properly. To compensate for the weakness, the heart becomes enlarged and the consequence is heart failure.

Formaldehyde causes cancer: American scientists have found that formaldehyde, a chemical used in textile, newsprint and cosmetic industries, causes cancer. It had been established earlier that formaldehyde, in low concentrations, can cause dermatitis, lung complaints such as bronchitis and asthma, menstrual disorders and pregnancy complications. Now, tests conducted by scientists at the chemical industry institute of toxicology using mice have established that the chemical induces cancer. Also, high rates of brain cancer have been found among workers engaged in industries where formaldehyde is used. Formaldehyde is also used as a disinfectant in operation theatres and as a preservative in laboratories.

NATO's 'follow-on force attack' approved: NATO's political authorities have approved a controversial plan envisaging deep strike into Eastern Europe with conventional weapons in the event of a Warsaw Pact attack. The concept aims to exploit new technology to track and hit enemy reinforcements upto hundreds of kilometres beyond the East-West border, delaying or preventing them from reaching the battlefield. By reducing enemy force ratios, the plan seeks to avoid early use of nuclear weapons by NATO. Called the "follow-on force attack" (FOFA), the plan is the brain-child of the Supreme Allied Commander-General Bernard Rogers. Defence analysts feel the plan will divert funds to highly expensive and unproven technologies for a mission which they denounce as "doctrinal reform of doubtful merit".

Pak seeks Hawkeyes, Harpoons from the US: Pakistan is seeking from the US highly sophisticated radar warning and command and control aircraft, and Grumman, Hawkeye and Harpoon anti-ship missiles, says the London *Jane's Defence Weekly*. Three new frigates the Pakistan Navy is trying to acquire from Britain are to be fitted with Harpoon missiles after modifications as are two French-built submarines. Foreign Minister Yaqub Khan has reportedly approached the US for E-2C Hawkeye missiles for defence against border raids by Afghan aircraft. The US is yet to take a decision.

The first German-built submarine under Indo-German collaboration will be delivered to India in 1986. Navy personnel will have to be trained in the latest high technology to keep pace with changing technology and be competent enough to handle the equipment.

NEIGHBOURS

MRD threatens to boycott elections: The movement for restoration of democracy (MRD) in Pakistan has announced it will boycott elections due by March next unless they are conducted under the terms of the 1973 Constitution. In a resolution adopted at a secret meeting, MRD leaders said President Zia-ul-Haq plans a "fraud in the name of elections". Any MRD member-party participating in the "fraud" would be expelled, said the resolution.

Plenary session on Lanka ethnic issue postponed: The Sri Lanka Government on Nov 8 postponed by one month the plenary session of the all-party conference on the ethnic issue, scheduled to reconvene on Nov 15. The postponement apparently was to allow more time for consultations and drafting of government proposals to resolve the island's ethnic crisis.

Zia not for use of force against Afghan attacks: The Pakistan President, in an interview to the Paris newspaper *Liberation*, said recently that Islamabad would not use force in response to attacks from the Afghan side; retaliation, he said, could lead to direct confrontation with the Red Army. Zia's statement contradicted a statement by Yakub Khan, the Pakistan Foreign Minister, who said his country would fight back if Kabul continued to shell Pak territory. Zia said Afghanistan had become a prestige issue for the Kremlin and predicted that the Soviet army would intensify its attacks against the resistance and step up pressure against Pakistan.

Pakistan has ruled out a ban on the entry of Khalistanis. Pakistan would expect them to

tion of the principle, "appropriate action would be taken by Islamabad". Sikhs from abroad would be welcome to visit Pakistan for pilgrimage. Each case would be dealt on merit where visa was required for entry.

Several Bangla diplomats resign: Several career diplomats in Bangladesh, including ambassadors, have resigned in protest against the appointment of active and retired army officers in vital foreign mission posts. The resignations were provoked by the government's decision to absorb army officers and other civil bureaucrats permanently in the foreign service cadre. The diplomatic missions in India, the UN, West Germany and France are headed by armed forces generals.

Pak abandons Sixth Five Year Plan: Heavy military spending coupled with debt servicing has forced Pakistan to abandon the Sixth Five Year Plan barely a year after its implementation. Pakistan now spends 73.4% of its revenue budget on defence and debt servicing. The rest of the 26% goes to meet police, intelligence and other security expenditures.

ECONOMY—National

India enjoyed a \$ 664m favourable balance of trade with the US in the first eight months of the current calendar year. Exports to the US totalled \$ 1,718.9m and imports from the US \$ 1,054.9m. One of the reasons for the higher exports is stated to be the US economic recovery. Besides exports of Bombay High crude, there has been a marked increase in exports of diamonds, readymade garments, cashew nuts and leather.

India not to press for \$ 2b ADB loan: India has decided not to press its application for a \$ 2 billion loan from the Asian Development Bank (ADB); the decision followed an ADB move to restrict the loan amount to \$ 200m for what India feels are "arbitrary reasons". India, the third largest shareholder in the ADB, has refrained from borrowing from the bank, set up in 1966, and been a donor alone. Last year, it put its application for the loan and scaled down the amount to \$ 1 billion in May this year. A 105% capital increase in the ADB's resources led New Delhi to hope for at least a \$ 1.2 billion assistance over 1983-87. The US, supported by Japan and the ASEAN, felt India should not borrow at the expense of existing borrowers, and the proposed \$ 200 million assistance was rejected by India as "most inadequate". The money was intended for, among other projects, a fertiliser plant and rural electrification.

India's repayment liabilities will peak during the Seventh Plan period and its foreign exchange needs will have to be met by increased receipts from abroad and reasonable amount of commercial borrowings. Finance Ministry and Planning Commission officials are now working out estimates of external resources likely to be available. But it is clear that more realistic assumptions will have to be made as the flow of developmental assistance gets reduced under the impact of the negative attitude of developed countries to the capital increase plans of development banks. Besides going in for increased commercial borrowings, India will have to achieve faster export growth rates and avoid excessive imports, economists say.

India's trade deficit during the first five months of the current fiscal year touched Rs 2,158 crores against Rs 1,730 crores in the corres-

The rise is attributed to the 18.7% increase in imports during April-August 1984 against a rise of only 12.7% in exports. The trade deficit for 1984-85 is expected to be around Rs 6,000 crores. A silver lining was that in August, exports registered a sharp increase, Rs 795 crores against Rs 585 crores in August 1983, meaning a 36% rise. Imports went up only by 10.4% from Rs 1,043.2 crores to Rs 1,152 crores.

India's strategy on the export front in the future will be: a part of the agricultural production would be set apart for export; there would be a gradual shift from bulk exports to value-added products; and areas where India has a competitive edge would be identified along with upgradation of technology to increase productivity in export-oriented industries.

Norway is to give India grants totalling Rs 25.4 crores in 1985 for projects related to fisheries development, health and family welfare and for commodity imports.

Indo-Soviet trade has been making good progress and the outlook is considered bright. The Russians have shown a keen interest in importing more of items like tea, coffee, spices, food products, garments and woollen knitwear. Their purchases of textiles are expected to increase and textile exporters in Bombay feel that Moscow may be willing to pay more for Indian cloth in response to its growing demand.

The Basic Chemicals, Pharmaceuticals and Cosmetic Export Promotion Council (CHEMEX-CIL) has exported items valued at Rs 155.98 crores during April-July 1984, as against Rs 138.33 crores in the corresponding period of the previous year. The export target fixed for 1984-85 is Rs 415 crores.

India is now capable of offering fertiliser manufacture technology to other countries. According to the Fertiliser Association of India (FAI), India can undertake turnkey projects for setting up fertiliser plants based on varied technology. The total investment in the country's fertilizer industry, estimated at around Rs 4,000 crores at present, is likely to rise to Rs 11,000 crores by 1990. With the production of 3.5m tonnes of nutrients in 1983-84, India has emerged as the world's fourth-largest producer and consumer of fertilisers, next only to the US, USSR and China.

ECONOMY—International

US trade bill passed: President Ronald Reagan on Oct 30 signed into law a Trade Bill that sets the course for future relations between the US and its trading partners. Among the Bill's provisions are an eight-and-a-half-year extension of the special programme benefitting 140 developing countries, known as the generalised system of preferences. It also aims to help the beleaguered American steel industry and its workers who have lost jobs because of foreign competition and outdated facilities. It calls on steel companies to reinvest and modernise to be eligible for import relief. The trade package essentially excludes strict quotas or high duties on imports of wine, steel, copper or textiles. Reagan called the Bill the most important trade law approved by the US Congress in a decade.

UNCTAD project for developing countries: A \$109m project has been launched to help set up the global system of trade preferences (GSTP) among developing countries, according to UNCTAD. The project, to be implemented by

UNCTAD, will provide technical backing to south-south trade negotiations under the GSTP. The GSTP is the centerpiece of the Group of 77's Caracas programme for economic cooperation. The project will provide technical support for 12 weeks of meetings during the next two years, involving about 70 countries.

UN food aid for developing countries: The UN world food programme's governing body has approved some \$216m worth of food aid for Third World countries. The aid, for 22 projects in 17 countries, is equivalent to 508,000 tonnes of food. The largest project is a \$31.4m one to feed workers engaged in social forestry and watershed development in UP over the next five years.

Dollar at par with SDR: The recent strength of the dollar had restored its parity with the IMF's SDR (special drawing right) that existed when the instrument was established in 1969. The parity had been broken by the December 1971 devaluation of the dollar against gold. As the dollar rose against other currencies in October, the SDR depreciated against the American currency till its value fell to \$0.995857. Reciprocally, the dollar rose to SDR 1.004160. The initial value of the SDR was established as the equivalent of 0.888671 grams of five gold—the gold content of the dollar in 1969. Thus the first SDRs were valued at one SDR = one dollar.

OAU call for aid to save Africa's economy: The Organisation of African Unity (OAU) has called for massive international aid to arrest Africa's unparalleled economic decline. At its summit in Addis Ababa, the OAU concentrated on the continent's drought-withered economy. Here are some statistics: Some 34 OAU states were affected by food shortages, food output declining by 11% between 1970 and 1980; aid from the developed world fell from \$14.2 billion in 1982 to \$7.8 billion in 1983; the rising interest rate had pushed up sharply the debt service ratio on African debts, which total \$150 billion. The summit said the economic decline was due to the West's control of the world economy and called for talks to involve the Third World more in the running of the economy.

UK plans to replace one pound note: The British Government has announced plans to abolish the one pound note and replace it with an unpopular coin much to the wrath of the people. The modern pound note was introduced in 1914 at the outbreak of World War I. Its introduction, to replace the gold sovereign, caused almost as much of a stir as its demise.

STATES

KKR merges with Congress (I): The Bangarappa-led Karnataka Kranti Ranga (KKR) on Nov 8 decided to merge with the Congress (I). With the merger, the strength of the Congress (I) goes up from 80 to 86 in a House of 225. The decision to merge was taken at a meeting of the party executive in Bangalore. The regional outfit, originally set up by Devraj Urs, has been a close ally of the Congress (I) since January 1983.

Recommendation to ban strikes in all power projects in Kerala: A high-level committee on "industry, trade and power", constituted by the Kerala Government, has recommended enactment of legislation banning strikes in all power projects in the state. It also recommended that such strikes should be declared a cognizable, non-bailable, economic offence punishable by imprisonment. The drastic recommendations by the committee, one of the five such set up to

assist the state planning board, came with reference to the "unreasonable and irrational labour militancy" by 110 workers delaying the Idmalayer power project for over three years. The loss to the state exchequer: Rs 33.65 crores.

The Gujarat Government has formulated a five-point direct action programme, involving an expenditure of Rs 500 crores, for the benefit of the very poor. Apart from a Rs 110 crores midday meal scheme benefitting 5m students, the state government will take up a Rs 200 crore scheme for providing foodgrains at subsidised rates to people whose annual income does not exceed Rs 5,000. Scholarships for meritorious students and sportsmen and drinking water projects are also on the cards.

Andhra Ministry expanded: CM N.T. Rama Rao on Nov 12 inducted 11 more ministers into his government, raising the strength of his ministry to 27. The new entrants: A. Kotiah, B.V.M. Reddy, V.N. Rao, A.P. Rao, S.H. Reddy, N.R. Reddy and A. Satyanarayana (all Cabinet rank), P. Chandrashekar, M. Narasimlu, B. Rajah, S. Rajeshwar (ministers of state). Before his dismissal on Aug 16, Rama Rao had run his administration with a 13-man team. The expansion of his ministry after his reinstatement in September was necessitated by the demand by legislators for offices of profit. Earlier, more than 50 MLAs were made chairmen of various state corporations.

Tamil Nadu Assembly dissolved: Tamil Nadu Governor S.L. Khurana on Nov 15 ordered the dissolution of the state Assembly. This was to facilitate a one-day poll to the Assembly on Dec 24 along with the Lok Sabha elections.

The cyclonic storm which left hundreds of Andhra and Tamil Nadu villages inundated and thousands of people homeless, is the worst natural calamity to hit the south in recent times. Unlike in the past, the cyclonic storm spread to the northern coast of Tamil Nadu as well as large parts of southern coastal Andhra. The cyclone had caused 1,315

A World Bank study on Kerala's fertility decline, which has received worldwide attention, attributes its success to socio-economic factors including education and health improvement and the most successful family planning programme in any state in India.

Kerala's Seventh Five Year Plan will aim at achieving an overall growth rate of 5.4% per annum to reduce the gap between the all-India average per capita income and that of the state and will seek to reduce the percentage of population below the poverty line to 25 by the end of the plan. Rs 8,900 crores will be required to achieve the proposed growth rate. The outlay of the 1985-86 Annual Plan will be Rs 507 crores.

EVENTS—National

Talcher plant produces heavy water: The Talcher heavywater plant of the Department of Atomic Energy has produced heavywater on an experimental basis, for the first time since its completion three years ago. The Rs 66-crore plant produced 105 kg of heavy water on Oct 24 after engineers modified its earlier design, found to be defective. The production was 25% of the plant's rated capacity and came after the earlier design was declared "unworkable".

Rath, Dhote expelled: Ram Chandra Rath, Minister of state for Fertilisers and Chemicals in the Indira Gandhi Ministry, joined the Janata Party on Nov 14 after resigning from the Congress (I).

(Continued on page 60)

BADMINTON

The Dutch Masters crown was won by Han Jian (China) when he beat Morten Frost Hansen (Denmark) 15-9, 18-14 in Utrecht on Oct 21. Thus, Han avenged his defeat of a week earlier at the English Masters. It was only the second defeat for Frost in national tournaments this year. He has already won six open championships while Han won the World Cup in September.

At the Scandinavian Cup championships in Randers (Denmark), on Oct 28, Hansen in turn avenged his defeat when he beat Han 15-10, 15-9 in the final.

Despite his absence from the grand prix circuit lately during which he underwent anti-coagulation treatment for blood clots, Prakash Padukone (India) has made it to the top 10 of the men's points table, which is as follows (after the Canadian Open):

(1) Morten Frost Hansen (Denmark)—1,730 pts; (2) Ick Sugianto (Indonesia)—870; (3) Steven Baddeley (England)—685; (4) Jens Peter Nierhoff (Denmark)—680; (5) Hastomo Arbi (Indonesia)—655; (6) Prakash Padukone (India)—560; (7) Liem Swie King (Indonesia)—520; (8) Han Jian (China)—455; (9) Nicklaus Yates (England) & Sijit Pamungkas (Indonesia)—450 pts.

BOXING

Marvin Hagler (USA) retained his undisputed (i.e., both WBA and WBC-recognised) world middleweight title, on Oct 19, when he knocked out Mustapha Hamsho in the third round of their scheduled 15-round bout at Madison Square Gardens in New York.

But the World Boxing Council (WBC) does not recognise 15-round bouts on grounds of safety. Their limit is 12 rounds. Thus, two days later, the WBC voted unanimously to strip Hagler of the title, and their President, Jose Sulaiman, said that the boxer had repeatedly been asked to conform to the 12-round rule, but had never responded to the requests.

Larry Holmes (USA) stepped into the ring after almost 11 months, and successfully defended his (International Boxing Federation) heavy weight title at Las Vegas on Nov 9. The referee stopped the scheduled 15-round bout against James "Bonecrusher" Smith in the 12th round, on the advice of the ringside doctor, because of a bad cut over Smith's left eye.

CRICKET

Sri Lanka beat New Zealand by four wickets in the first 1-day International in Colombo on Nov 3. In another fixture in the same place, the Kiwis beat the Sinhalese.

New Zealand captain Jeremy Coney—speaking on Hyderabad (Pakistan) television after his team lost the second Test and thus the current 3-Test series against Pakistan—criticised the Pakistani umpiring, even though he had been

number of doubtful decisions.

Without naming umpire Khizar Hayat—the same man who provoked Sunil Gavaskar to launch a diatribe against Pakistani umpiring—Coney left none in doubt as to who had incurred his ire. Asked to comment on Coney's remarks, Pakistan skipper Zaheer Abbas said that since the Kiwis had lost, they were making excuses. He had even some bad remarks for Indian and New Zealand umpiring.

The Australian cricketers lost their heads, their pride and the chance to level the series against the West Indies as they gave another dismal performance to lose the second Test by eight wickets at the Brisbane Cricket Ground on Nov 26. The West Indies won the first Test, in Perth, on Nov 12 by an innings and 112 runs.

After skipper Kim Hughes promised a grittier performance, the Australian fightback in the Brisbane Test spluttered like a damp squib in the face of the explosive talents of Clive Lloyd's "unbeatables".

With the Australians 2-down in the 5-Test series, Hughes stunned a packed post-match news conference by announcing his resignation as captain. Visibly broken, Hughes, 34, said: "The constant speculation, criticism and innuendo by former players and sections of the media over the last four or five years have finally taken their toll".

While Hughes was left to survey the wreckage, the victorious Lloyd said: "What we want is for Viv Richards to come good. He is striking the ball well but the runs are not coming. If Viv hits form in the third test, we should be right for the fourth and fifth".

Even without a vivacious 'Viv', the West Indians have now stretched their undefeated sequence to a world record ten. With man-mountain Joel Garner going great guns, and Larry Gomes and Jeff Dujon shoring up with the willow, Australians can do nothing better than weep.

Former West Indies Test captain Alvin Kallicharran has established something of a record in race-conscious South Africa. He has signed a 3-year contract, according to which, he will not only play and coach for Rovers Cricket Club in Welkom, in the Free State province, but will also captain the provincial team in the white-controlled South African inter-provincial tournament. This is the first time in the history of South African sport, let alone cricket, that a black person of Indian origin will be the "boss" of the white boys.

The Pretoria regime has circumvented its 86-year-old law—whereby all Indian people in South Africa are not allowed to stay for more than 72 hours in this province—by claiming that "Kalli" has British passport, and therefore, is not a local Indian.

Kallicharran has been instrumental in getting other West Indians to play in South Africa as well: Sylvester Clarke for Transvaal province; Collis King and Colin Croft for Natal province; and Faoud Bacchus for Western province.

MOTOR RALLY

The 5th Himalayan Car Rally was terminated on Oct 31 following the brutal assassination of Prime Minister Mrs Gandhi. Till then, 21 of the 37 competitive sections in the first two legs of the rally had been completed. These comprised a

Jayant Shah, who had topped TT7 penalty points, was declared the winner. Coming in second and third were Raieev Khanna (276 penalty points) and Ramesh Khoda (281 penalty points). No formal prize-giving function was held.

SNOOKER

O.B. Agrawal (India) broke the 21-year England-Wales stranglehold on the World Amateur snooker championships when he beat defending champion Terry Parsons (Wales) 11 frames to 7, in the final, at Dublin, on Nov 4. This was the first appearance for Agrawal in this event.

Earlier, in a group match, Indian national champion M. Jayaram lost to T. Draggio (Malta) 4-0.

SQUASH

Jahangir Khan (Pakistan), unbeaten since April 1981, won yet another major title when he trounced Stuart Davenport (New Zealand) 9-5, 6-9, 9-0, 9-1 in the final of the World Masters tournament in Warrington (England) on Oct 31—his fifth win in the event. The women's title was won by Luck Souter, the 19-year-old junior champion of Great Britain, when she beat World No. 1 and the hardest-hitting woman in world squash, Susan Devoy (New Zealand) 9-0, 2-9, 9-2, 6-9, 9-5.

MARATHON

The Rath Open Indian Marathon, which had been named 'Peace Marathon for national unity and integration', was held in New Delhi on Nov 18. A little under 900 runners participated in the four sections of the race. Results: **Men: Full Marathon:** 1. Sumer Singh (CRPF)—2:24:30; **Half Marathon:** 1. Satish Kumar (FCI)—1:09:08.6 sec; **Women: Full Marathon:** 1. Sunita Anand (Mother's International School)—3:55:30. (This 25-year-old yoga instructor at the school was the only woman to finish the race).

FOOTBALL

Mohun Bagan (MB) of Calcutta lifted the Durand Cup, on Nov 19, by defeating their archrivals, East Bengal (EB), also of Calcutta, by the only goal of the match in New Delhi. The goal came in the sixth minute when Manoranjan Bhat-tacharjee (EB) made a casual clearance and allowed Bidesh Bose (MB) to get the ball under control just 10 yards outside the box.

Seeing his opportunity, Bidesh was lightening itself: going a few paces forward, he unleashed a perfectly timed left-footer from about four yards outside the box. Bhaskar Ganguly in the goal could hardly be faulted for letting in the blinder.

TENNIS

The \$3,15,000 Scandinavian Open championships, one of the oldest indoor tournaments in the world, ended at Stockholm, on Nov 5, in victory for World No. 1 John McEnroe (USA). To win this title for the third time, he beat defending champion Mats Wilander (Sweden) 6-2, 3-6, 6-2.

SANJEEV GUPTA

WHAT AILS INDIAN SPORTS?

BY J.V. ARUN KUMAR

Ranjit Bhatia, an eminent sports journalist and former Olympian, spoke on the "State of Indian Sports" at the CCTimes lectures held recently in Kirori Mal College, Delhi. He directly blamed the fatalistic attitude of Indians for the lack of "world beaters amongst us". Excerpts from his lecture:

In the thunder of guns and the mushroom clouds, World War II catapulted sports overnight to the forefront of human activity. The world's Mallorays not only conquered the Guns of Navarone but also brought to their countries an almost pathogenic escape from despair: sports. For an organised personality development and recreation of the young, and to provide a channel for the energies of the youth—no one wanted a repeat of the horror of the Hitler Youth—sports were encouraged at that time.

The Winter War and the siege of Moscow did not deter—indeed spurred—the Soviets from excelling all in the early '50s. In their ranks were many sportsmen and women who consistently broke world records to win top honours. All this was a direct result of some arduous work and of the vigorous sports programme of the State. The strategy was to make sports a way of life and towards this end, large number of facilities were provided.

West European countries were quick to emulate the Russian feats and they combined attractive incentives with tremendous sports facilities. New attitudes came about and in countries like West Germany, many were the people who actively engaged in sports. Emerging not unscathed from the trauma of the Vietnam War, track suits and seafood replaced marijuana and heroin as hot favourites in American Universities. And in the '70s, the US appeared as a sports superpower. From the ghettos of New York to the impoverished waterfront of California, American Blacks, Indians and Hispanics made it to the undreamable Ivy League universities on football, boxing and baseball scholarships. Overnight it seemed, from a programme of few sports scholarships, the approach had changed to mass subsidisation of sports at all levels by the State. The 'jogging mania' in America is symptomatic of this change in attitude and mentality. Encouragement for mass participation resulted in worldwide success and champions came up fast and aplenty.

More importantly, a 'second-line of defence' also emerged along with the great performers, only to step in at the right turf at the right call—successfully. Of course, all those who participated in the games, taking advantage of the existing facilities, did not win medals or go to tournaments. But some of them became very good sports administrators and organisers, giving a tremendous boost to the sports standards in their countries. Another remarkable trend was that even some superb sportsmen, after retirement, contributed their mile in the development of sports. For instance, the brain behind the telematches held in West Germany is a former ice-skating ace and an Olympic champion.

bad. The country has always been an active sporting nation with international participation dating back to the 1920s. The then sportsmen belonged to the forces and played no small role in raising India's prestige. Christian missionary schools of the time believed in combining education with sports for personality development. This led to the emergence of sportsmen of some merit.

But there were inbuilt weaknesses in our sports system, notwithstanding the fact that Indians were fond of outdoor activities since early times. The flawed attitude was to only capture medals and the world stage. Otherwise sports meant little to an Indian. But for a Milkha Singh here and there, the Indian performance remained insipid by and large. But for a genius sportsman or two, most others got a place in the side because of the patronage extended them by the powers that be. Compounding the woes of a poor side was poor coaching facilities available at the lower levels. And, sometimes, even its absence. Even today, teams are selected first and only then coaching imparted to the chosen few. One or two of them genuinely live up to the phrase 'chosen few'—courtesy our politicians. And this is the most important reason for our failure to produce 'record breakers' with regularity.

While the lack of facilities and equipment has hampered the progress in the sports arena, it is more our attitude towards sports which has failed us. The lack of a second line of defence, starkly evident by our Olympic hockey debacle, is a serious handicap and is a direct outcome of our small sports base. Even today, the situation is not very different. Very few turn up to witness local fixtures—the less said about the national selectors, the better. Our attitudes are still attuned to winning medals and awards at the international level.

But consistent, good performances need a much healthier outlook towards sports. Due to their mental make-up our sportsmen and women have certain inherent weaknesses. After their tie-ups, they lose interest in the proceedings and are not keen on picking up a few tips by watching their counterparts from other countries in action. Sometimes, our players are so ignorant of the strong and weak points of their opponents that they cannot plan their strategies with success. This is precisely what struck Indian hockey, at the Los Angeles Olympics, in their match against the US. This approach is fatal and responsible for the low standards of sports in India. Lack of killer instinct and of the knockout punch also prevents Indians from emerging as top performers. The satisfaction with 'good' performances rather than the best has seriously hindered the progress of our sportsmen and women. There is also a lack of knowledgeable sports organisers and, thus, ill-planned schedules for our players are no surprise.

If we are to come up as a great sporting nation our fatalistic approach must change. Sports must be seen as a way of life and the sports culture must be finely blended with our routine. Mass participation in sports must be encouraged and this will help in building up a stock of great performers. The creation of a Sports Ministry and the Sports Authority of India augurs well for the future. But only a judicious use of the existing facilities, increased per capita expenditure on sports and a sea change in our attitudes can take us to the top in the sports arena.

(Continued from page 15)

remained confined to the areas of its birth and has not moved to other parts of the country. Credit is taken by the planners for the additions made to the area under irrigation, increase in domestic production of fertilisers, and spread in the use of high-yielding varieties of seeds achieved over the period of 17 years since the beginning of the Green Revolution.

Against this encouragement to agriculture under the aegis of planning is to be put the discouragement provided by the equivocal agricultural price policy pursued by the government during the period of three Plans, from the Fourth to the Sixth, that in any case has constituted a serious deterrent to agricultural growth in the country apart from imposing a heavy burden of subsidies, amounting now to over Rs 2,000 crores a year, on the national exchequer. The planners cannot take refuge in the plea that their attention was directed during this period to the industrial and the complementary industrial field.

The record in the industrial field of Plan achievement is no better and is in some ways even worse than that in agriculture. In the latter case there is the excuse of weather factor; there is none whatsoever to explain the dismal performance of the industrial sector in which the "commanding heights" are held by the public sector enterprises.

It may sound cynical but it is a painful truth that, if all the resources the country has deployed in development effort over the period of the last three Five Year Plans had been deployed without the trimmings of planning the economy would have been in a far healthier state today.

Burden

Mounting annual budget deficits which are the main source of inflation in the country would have been avoided; dependence on foreign aid would have been reduced and significant progress made towards self-reliance: the debt service burden would have been kept within more manageable limits; and individual enterprise and initiative would have had a more conducive environment to operate and produce results. The objection may be that that would be capitalist path of growth whereas the country is committed to socialism.

But what does socialism mean in the Indian context but inefficiency, corruption, black money economy, growing disparities and mounting caste, class and communal conflicts. It is time now that we seriously pondered over the achievements or otherwise of the system of planning that we adopted and let launching of the Seventh Plan wait till the necessary reform of the system was carried out.

Courtesy *The Statesman*

REVIEWING FOR BETTER VIEWING

BY AMITA MALIK, Film and TV critic

As we all know, Doordarshan celebrated its silver jubilee on Sep 17 last year. And it takes me back to a day, 25 years ago, when I conducted my first-ever TV interview with Alfred Hitchcock, the producer of some of the best thrillers ever made for the cinema. The studio we were in was set up for an Indian trade fair in what is now called Pragati Maidan in the capital. The equipment was Philips.

With this gifted equipment and with UNESCO and USA's Ford Foundation as guides for its pilot project, TV was started officially in India. Telecast began as modest, short-duration transmissions for secondary schools on the basis of a scheme drawn up by an expert, Paul Neurath. Then an evening entertainment transmission went on the air when Indira Gandhi became I & B Minister in PM Lal Bahadur Shastri's Cabinet after the death of her father in 1964.

Since then, Doordarshan has expanded tremendously insofar as coverage goes. As our young readers probably know, India's target of installing transmitters by 1984-end was 180, covering 70% of the population. In between, Doordarshan—known outside the country as 'Television India' since the Indian name is a little difficult for foreigners—has carried out some interesting experiments, such as the Satellite Instructional Television Experiment (SITE) which started in 1975 for a year. It was meant for village education and was carried out by a US NASA satellite, ATS-6. Specific rural areas in six states were identified and instructional programmes beamed directly to 2,400 television sets there. Opinions differ about its success. But it was well worth a try.

Now that the future of Doordarshan is in their hands, the young need to assess for themselves the success of this media in serving the social needs of what is still a poor and developing country. And to assess whether its software (programmes) has kept pace with the awesome speed of one TV transmitter for its hardware (equipment).

There are many, including this writer, who think that Indian TV is trying to run before it can crawl. And that it has not served its basic purpose of educating a vast, at times pathetically poor and mostly illiterate population. That TV can serve to educate people has been proved by a classic instance, that of *Telescuola*, a television school, in Italy. In a matter of months, *Telescuola* beamed literacy to an entire village, including old people who had never hoped to be able to read and write. Our own track record pales in contrast. Many of us who write on

Doordarshan have paid surprise visits to secondary schools in the capital to assay the effectiveness of the lessons telecast by Doordarshan in tandem with the Delhi Administration's Education Department. We have found that not only are the programmes telecast of poor quality, with presenters and teachers inadequately trained in the highly specialised medium, but also the sets are improperly maintained. In any case, it does not seem right that in a country with 28-lakh domestic TV sets, there should be only 10,000 for community viewing.

Such poor planning also affects the newly-begun telecasts by the University Grants Commission (UGC), which I am sure many of our readers have already heard of, though it has been poorly publicised. For instance, although the rest of the country got these telecasts from Aug 15, Delhites got to view it only after the second channel went underway, a good month afterwards. And when they started, it was found that not a single college in the metropolis had a TV set, although the UGC subsidises the purchase of colour TV sets for community viewing. (Unfortunately, of the 800 colleges all over India, only 300 had bought sets by mid-October.) Then it was found that the timing was inconvenient for almost everyone. Bangalore has no classes at that time while Nagpur colleges have laboratory work from 3 to 4 p.m. Also, it is impossible to accommodate more than about 40 students at a time to watch programmes on a TV set. So, one set per college seems totally inadequate. Lastly, in the matter of timing, many colleges have games between 3 and 4 p.m. and students have to miss either the TV lessons or the games.

I strongly feel that this sort of situation can only arise when college students are not assertive enough about their rights. In the many letters I receive from listeners and viewers, I find that college students seldom make appreciatory or deprecatory comments about radio and TV programmes.

The same applies to Doordarshan programmes for youth. Quite a few of them are now put on at 10 p.m. or even 11 p.m. Also, they are constantly cancelled or changed to make way for reports on political meetings, conferences, or special reports on opening of TV stations by politicians. But has any college student protested? If so, he hopefully wrote straight in to Doordarshan. On the contrary, protests (and these I think were from the college students) poured in when I once wrote about too many imported programmes. They said that the programmes presented by Doordarshan locally were dull

and were not worth watching. But what about the worthwhile programmes for India's untethered millions, including millions of young Indians who neither understand English nor care for pop music of the imported kind? What about young people in the remote villages of India who do not even have a transistor radio?

If I were asked which programmes on Doordarshan are worthwhile for young people, I would mention the science quiz or *Quest*, a Calcutta TV presentation, because young people participate and get involved and it is educative.

Imported programmes on wildlife, though most times years old and in black and white, are interesting and educative. They have a very high quality of presentation, they capture the audience. Some are about India itself, but made by foreigners. I could not help wondering why, first, Doordarshan could not itself have made a programme on, for instance, the one-horned rhino, instead of importing it. And why they could not have projected the splendid documentary on the Ganges Gharial made by the two young Bedi brothers which has been shown on the best networks abroad and won high acclaim.

Now this is the sort of lop-sided programming which should not only make young viewers think, but also force them to protest—by writing in to Doordarshan, or to the papers, and why not?

Every country, they say, gets the TV it deserves. And I think every country's youth gets the TV it deserves too. There was a time when the Yuva Vani of AIR Delhi was a trend-setter. Young people conducted panels with the most distinguished writers, economists and politicians in a programme called *Firing Line* and really gave a piece of their minds to the older generation. I remember a feature on the red light district of Delhi made with compassion and power by a young producer called Gujral. I have not heard such an effective programme on the radio or seen one on TV. Where has all that talent gone? And why is it that a similar new wave in youth programmes is not evident on TV, which is a much more dramatic medium.

The other day I & B Minister H K.L. Bhagat made an announcement that he had asked the states to set up training centres for young people to learn to repair TV sets as there was a great future in it. It suggested that the sets were always breaking down. The humour was perhaps unconscious. But I wish the government would rather ask the states to train more young people in making better TV programmes. Now, that would really be the day. And, incidentally, the editor had asked me for a general article on Indian TV. Please forgive me for getting carried away and writing instead about youth and Indian TV. I found it both more exciting and relevant. And now it is up to you to start the great debate.

CAREER COUNSELLING

BY G.J. UNNITHAN

Director, Students Advisory Bureau, University of Rajasthan

Which courses of the City & Guilds of London Institute are recognised by the Indian Government?

Y. Paradesi Kumar, Palagudem (AP)

The following courses have been recognised by the Indian Government: City & Guilds College, Kensington, London-A.C.G.I.; City & Guilds of London Institute, Technical College, Finsbury—diploma or higher certificate 3 years' course if taken after passing the matriculation or the institution's studentship exam or its recognised equivalent; City & Guilds of London Institute—a pass in the final-grade exam in Electrical Engineering Practice, Parts I & II of the City & Guilds of London Institute held upto and including June 3, 1950. Further details regarding admissions may be had from the Technical Division of the Ministry of Education, Shastri Bhawan, New Delhi-110 001. These exams are generally of a level equivalent to an ITI or polytechnic course.

Which institutions/universities offer M.Sc. (by research) in Immunology or Pharmacology or Biochemistry/Microbiology etc?

R. Kannan, Bangalore

A separate degree in Immunology either in the medical or science faculty is not available in India. For other disciplines, contact the following medical colleges to find out which ones offer M.Sc. by research only: Medical College, Rohtak, L.T. Municipal Medical College, Sion, Bombay-400 022; Government Medical College, Aurangabad-431 001; S.R.T. Rural Medical College, Ambajogai-431 517; E.J. Medical College, Pune-411 001; Miraj Medical College, Miraj-416 410, Sangli; S.M.S. Medical College, Jaipur; Christian Medical College, Vellore-632 002; Postgraduate Institute of Medical Sciences, Chandigarh-160 012; All India Institute of Medical Sciences, New Delhi-110 029; Maulana Azad Medical College, New Delhi-110 002; Goa Medical College, Panaji-403 001; JIPMER, Pondicherry-605 000; P.G. Institute of Basic Medical Sciences, University of Madras, Madras-600 113; V.P. Chest Institute, Delhi-110 007. M.Sc. Biochemistry and Microbiology are also taught in the science faculty of a large number of universities.

Having passed pre-engineering (10+2) with 48% marks, can I become an aircraft maintenance engineer (AME)?

Atul Verma, K.B. Dharamsala (HP)

Minimum qualification for the AME course is 10 + 2 exam (or equivalent) with Physics, Chemistry and Mathematics. The candidate must be 21 years when he appears at the AME exam, which is conducted by the Directorate General of Civil Aviation (DGCA), Government of India, New Delhi. DGCA is the only licensing authority in India. There are a limited number of coaching institutions in India which can prepare candidates for this exam. They are: Jamia Millia Islamia University, Okhla, New Delhi; Hindustan Institute of Engineering Technology, G.S.T. Road, St Thomas Mount, Madras; Air Technical Training Institute, Dum Dum Airport, Calcutta; and Southern College of Engineering and Technology, Luis Nagar, Chalakudy, Alwaye, Kerala. Normally, two-and-a-half years of theoretical and a half year of practical training are necessary to face the AME exam.

I am a 1st year M.Com. student with Trade and Transport as my main subject (both national and international). Please give me further details concerning job prospects and further studies.

Kumar Shyam, Bombay

If you can manage a good 2nd division, you can get ready employment in the private sector. Advanced training could be had at the Indian Institute of Foreign Trade, Ashok Bhawan, 23 Nehru Place, New Delhi-110 024. However, take a job first. Its nature should indicate the kind of advanced training you require for promotion and better prospects.

I am a 1st class Psychology post-graduate majoring in Industrial Psychology. Will my doing M.S. Industrial or Personnel Management secure me a good job?

Seetha Shenoy, Cochin

Yes, if it is from an institute of repute. Moreover, M.A. Psychology is much too theoretical.

I am a Geophysics postgraduate. Where in France can I continue my doctoral studies.

N. Purnachandra Rao, Secunderabad

Contact the University of Bordeaux (351, Cours de la Liberation, 33405 Talence), Unit of Regional Geological Studies; University of Grenoble (B.P. 53, 38041 Grenoble), Unit of Earth Sciences; University of Lille (B.P. 36, 59656, Villeneuve d'Ascq), Unit of Earth Sciences; University of Languedoc (Place Eugene Bataillon, 34060 Mon-

pellier, Unit of Fundamental Geological Sciences; University Pierre and Marie Curie (Paris VI) (4 Place Jussieu, 75230 Cedex 05), Unit of Earth Sciences. This is a restricted list only.

What are the job prospects after studying Tourism in Austria and Switzerland? What is the admission procedure? Is government scholarship available?

Rajiv Kumar, Patna

Both Austria and Switzerland have excellent training facilities for Tourism and Hotel Management at the vocational/professional level. Admission is open on direct application. Knowledge of German is essential. Both countries offer scholarships to Indians with prior experience. These scholarships are channelled through the Union Ministry of Education. Up-to-date information about institutions offering these courses may be obtained from the embassies of these countries located in Jor Bagh and Chanakyapuri, New Delhi.

I am a final-year Food Technology graduate. Which is better: to continue with postgraduation or take up M.B.A?

D.D. Shendey, Nagpur

Few universities like Govind Ballabh Pant Agricultural University, Nainital (UP); Jadavpur and Mysore universities teach M.Sc Food Technology. Candidates with these qualifications can look forward to advanced research positions; those taking up M.B.A. instead might qualify for good jobs in food-processing and related industries. Eventually, it is your interest which must determine the choice of a career.

I wish to do a course in Ship Technology.

C. Hari, Jamshedpur

Contact the Department of Ship Technology, University of Cochin, Thrikkakara Campus, Cochin-682 022, which conducts a B.Tech. course in Naval Architecture and Ship-building. Minimum qualification: 12th Class exam with 1st division. There is an entrance test followed by an interview. ■

NOTE TO READERS

Before rushing in your career problem, check if it can be solved by looking up our sections on *Careers* or *Career Counselling* in the earlier issues. Space is limited; the mail received staggering. Letters chosen are those of general interest or in particular cases where the information is hard to find or has not been published before. Many readers ask for a personal reply. Sorry, this is not possible. So please don't send postage or envelopes. Make your queries specific and brief. Send them to Career Counselling, Career & Competition Times, 10 Daryaganj, New Delhi-110 002. Your letters should be accompanied by the coupon.

CAREER COUNSELLING
CAREER COUNSEL

(Continued from page 22)

OUTLAY FOR EDUCATION AND LITERACY FOR ALL

The future of a nation depends largely on the rate of literacy among the masses. Education contributes to increased productivity and production and by making a person self-sufficient, to a large extent, reduces exploitation and increases awareness in every aspect. Keeping in view the crucial role education plays, the working group on elementary education constituted by the Planning Commission has proposed a Rs 6,200-crore outlay with respect to norms representing the minimum needs of schools. This step has been taken on the lines of the PM's stress on the need to revamp the education system in the country.

The fourth all-India educational survey conducted in 1982 revealed a rather bleak picture of educational facilities. The conditions in elementary schools particularly in rural areas are appalling. About 40% of the 4,70,000 primary and 14% of the 1,12,000 middle schools have been set up in *kutcha* thatched huts and even open spaces. Of the primary schools 36% do not even have the bare minimum of furniture including mats for children to sit on, blackboards, and 60% have no drinking water facilities or toilet facilities. Also, at present there are 1,70,000 single-teacher schools in urgent need of more teachers.

Taking all this into consideration, the Eighth Finance Commission has also agreed to provide special assistance worth Rs 70 crores to education over the next five years. The basic aim of these extensive programmes to boost education is to ensure the fulfilment of the constitutional goal of providing free and compulsory education to all children in the 6-14 age group by 1990.

If this goal has to be achieved the total enrolment in this age group must increase to 640 lakh children, 250 lakh of whom will be in formal schools. A minimum of 9.68 lakh teachers would be required for catering to the needs of these children. And for this, teacher training facilities for 3.68 lakh teachers would have to be created. Nearly Rs 2,300 crores would be needed for building new schools. And over 15 lakh instructors on part-time basis, requiring pre-service training too, would also be needed to meet the requirements of the 390 lakh children in the non-formal school system.

NEWS CAPSULE

(Continued from page 53)

Rath was dropped by PM Rajiv Gandhi. Jambhvantrao Dhote, MP, who was expelled from the Congress (I) for anti-party activities, resigned from the Lok Sabha and on Nov 15 announced his own party "Krantikari Congress".

Electronic telephone exchanges: All new telephone exchanges commissioned in the four metropolitan cities of Delhi, Bombay, Calcutta and Madras, will be electronic. The electronic exchanges are of two types, analogue and digital. Six analogue exchanges are already functioning in the country, two of which are in Delhi—291 and 77 exchange. The first digital exchange will be established at Worli in Bombay. In this system speech can be transmitted by converting it into a digit stream and reconverting it into words at the other end.

Fruits of Technology Corner: About 300 products from strong furnace bricks to highly sophisticated equipment like canned motor for heavy water projects and gamma scintillation camera are ready at the Bhabha Atomic Research Centre (BARC) at Bombay for technology transfer to the Indian industry. "Technology corner"—a novel idea by BARC to take the fruits of research at the centre to the industry and in turn to the people is a major achievement for the country.

EVENTS—International

UN deplores Vietnamese occupation of Kampuchea: The UN General Assembly on Oct 30 passed a resolution deploring "armed inter-

vention and occupation" by Vietnamese forces in Kampuchea. The vote, 110-22 with 18 abstentions, was the biggest in six years and continued a trend of growing support for the resolution that has been passed in similar form each year since 1973.

Pinochet declares state of siege in Chile: Chile's President Augusto Pinochet on Nov 6 declared a state of siege nationwide to "end criminal, terrorist and subversive onslaught" against his military government. The crackdown came a week after eight people died in Marxist-led demonstrations for a swift return to democratic rule and after six policemen died in terrorist attacks.

Morocco quits OAU: The OAU suffered a jolt on Nov 13 when Morocco quit the body in protest against the seating of the Polisario Front. Morocco announced its decision to quit the OAU, which it helped found, just before the close of the continental body's 20th session in Addis Ababa. Morocco claims sovereignty over the Spanish Sahara, now represented by the Front. Tanzanian President Julius Nyerere was elected OAU's new Chairman during the session which adopted a resolution praising Indra Gandhi's contribution to world peace and the Non-aligned Movement.

UN proclamation for peace: The UN General Assembly on Nov 12 proclaimed that "the peoples of our planet have a sacred right to peace" and that its preservation constituted "a fundamental obligation of each state". The proclamation was adopted by a vote of 92-0 with 34 abstentions on a draft resolution sponsored by Mongolia and seven other countries. It was for

Rs 900 crores for elementary education and working group has also put forward a number of recommendations aimed at achieving the goal. These include the continuation of non-formal part-time education programmes for elementary age group children in the Seventh Plan; enhanced support for the scheme at the Centre; provisions by the Integrated Rural Development Programme (IRDP) and National Rural Employment Programme (NREP) in respect to construction of school buildings and also agencies like the Khadi and Village Industries Commission and the Handloom Board rendering assistance towards organisation of meaningful, socially useful productive work by providing raw materials as well as arranging for the sale of finished products.

And even if a part of the proposed scheme is achieved, it will go a long way in promoting education and eradicating illiteracy.

COLOUR TV

AT REDUCED RATES

The electronic industry is all geared to grow and expand by quantum leaps. The customs duty concessions granted to this industry in August '83 and then in October and November '84 have been "further liberalised and nationalised".

Prices of black and white TV sets and colour TV sets and other electronic goods is expected to fall further because of the recent announcement of customs duty concession worth Rs 10 crores. The Department of Electronics has contributed to the revolution in this electronic medium by clearing the hurdles encountered while meeting the growing demand for picture tubes. Several manufacturers have been allowed to enter the foreign market directly to satisfy their needs. The cumulative effects of these steps might just ensure availability of colour TV sets at a relatively less amount.

The government has completely exempted from customs duty a number of raw materials like chemicals of special grade and high purity metals which are, at present, attracting customs duty ranging from 120-131% *ad valorem*. The rate of customs duty on critical inputs like TV glass bulbs and shell and parts of rotor assemblies, which are already enjoying concessional rates of duty of 40%, has been further reduced to a meagre 15%. The customs duty on polyethylene terephthalate film has been slashed from 236% to 40% *ad valorem*. This drastic axing of import duties means a revenue sacrifice of Rs 9.7 crores.

JYOTSNA SHARMA

the first time that the General Assembly adopted such a resolution. The US abstained but the Soviet Union supported the resolution.

DIED

Rajinder Singh Bedi, 70, noted writer and film-maker, on Nov 11 in Bombay, of cancer. Bedi won the Padma Shri for his contribution to Indian literature. His works included the Punjabi novel *Ek Chadar Maili Si* while his best-known film remains *Garam Coat*.

Martin Luther King Sr, 84, father of slain civil rights leader Martin Luther King Jr, on Nov 11 in Atlanta. King Sr's non-violent preachings during the 1950s and 1960s earned him a place in the forefront of the civil rights movement in USA.

Rehman, 66, veteran character actor on the Hindi screen, on Nov 5, of throat cancer. Rehman's film career spanned four decades.

Faiz Ahmed Faiz, 73, the editor of the *Pakistan Times* and a noted Urdu poet died on Nov 21 of a heart attack. Faiz spent a whole year in solitary confinement under the Rawalpindi conspiracy case, when he was not allowed to use even his pen. He described his confinement in the following words (translated): "Let them take away my pen and paper, I have dipped my fingers in the blood of heart."

Y.B. Chavan, former Deputy Prime Minister, expired after a brief illness on Nov 26. He was also former CM of Maharashtra and was to have contested as a Congress (I) nominee in the Lok Sabha elections from Satara, his home constituency.

ANUPAM MATHUR & A.P.

The Reservation Policy

Reservation: Thirty-seven years after independence, it is a patently inflammatory word. Despite India's progress in many spheres, its society is enmeshed in social tensions along caste lines. Often, tensions reach flashpoint against positive discrimination favouring the depressed castes. And, the fact is, reservation has yet to produce an outstanding administrator, educationist or careerist.

Before independence, liberals brought up on Western democratic values—like Mahatma Phule, Sree Narain Guru and others—failed to stem the social malaise of caste dominance. Where they failed, Gandhi realised that unless the deep-seated hatred against the lower castes was removed, more political freedom would not "free" the Indian society of its evils. He advocated fundamental changes in the Hindu society and christened the depressed classes as 'Harijans'—Children of God. Deeply influenced by Gandhi's ideals and aware of the discrimination against the Harijans, Ambedkar and others of the Constituent Assembly provided for reservation in the Constitution.

Then viewed as a transitory measure, reservation was meant to open up new jobs and training opportunities for the underprivileged, socially ostracised Harijans. It was hoped that the intermingling of communities would lead to the natural acceptance of the Harijans as "equals".

Quite the opposite have been the consequences of reservation. For one, the divide between the upper and lower castes is near total. For another, even among Harijans, it has created an island of the elite. These men cut themselves away from their roots and seek to merge with the upper castes, thus depriving the depressed classes of effective leaders who can raise the banner of injustice and exploitation.

Even where the fruits of reservation are a bit more diffused, there has yet not been any significant rise in the economic, political and social fortunes of Harijans. While reservation has given them a semblance of representation in Parliament and in state Legislatures, their numbers are fairly small in the indirectly-elected Rajya Sabha. Economically, they are complete write-offs. And the percentage of government jobs reserved for them are not filled up because they don't come up to the minimum education standards prescribed.

Despite the failure of reservation in bringing about a change in the standing of these deprived classes, anti-reservation sentiments have been gathering strength. After independence the higher castes, coincidentally, came to occupy all the important posi-

tions created by the forces of modernisation and benefited considerably in terms of education and social standing. Amassing huge economic strength was a natural outcome giving the upper castes considerable clout in society. Though the depressed classes have gained by the new institutions, their numbers are very small. But the winds of change have made them more vocal in their fight for their rights. Under the circumstances, reservation is seen as an instrument by the upper-caste Hindus as a threat to their position and power. To prevent the upward movement of the lower castes, they are highlighting the issue of "merit" and "efficiency" being overlooked by the policy of reservations.

Another argument of the anti-reservationists is that this policy has created vested interests and discouraged creation of skills, resources and other attributes essential for the progress of society. The result of such generosity, it is argued, is the creation of a class which takes concessions for granted and is a burden on society. This step is viewed as a populist one, as a substitute for radical reforms—more difficult to initiate. It is contended that electoral convenience and not moral justification alone has been at the root of this generosity. Harijans are seen as 'vote banks' by the ruling classes and, hence, the populist measure of reservation.

Another reason advanced for the scrapping of reservation concerns the fears of the upper castes regarding meritorious Hindu candidates being overlooked at the time of admissions, employment and promotions because of reservation. In a situation like this, the Mandal Committee report advocating that reservation be extended to other backward classes has very little chance of being implemented.

The anti and pro-reservation arguments need to be viewed in proper perspective to arrive at a solution. While it is true that reservation was created as a temporary measure, in reality, it has been institutionalised. As a result, the few amongst the Harijans who have gained are seeking more and more concessions for their kith and kin.

The panacea to the malaise is to strengthen the educational and employment infrastructure for everyone, particularly for the underprivileged. Ultimately, securing higher rate of growth and percolation of these fruits to the lowest rungs of society is the only course for the elimination of social tensions. All said and done, the efforts should be directed in ensuring that those enjoying the benefits of reservation strive hard to justify the advantage they get. Reservation should not be viewed as a licence for lethargy and inefficiency.

J.V.A.K.

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VARIED VOCATIONS

BY JYOTSANA KAPOOR



Delhi University has taken a major step forward and for the first time this year introduced vocational courses at the B.A. (Pass) and B.Sc. (General) levels. The purpose for introduction of these courses, according to Prof Mohinder Singh, Dean of Colleges, is to provide the students with better job prospects and a brighter future: "B.A. (Pass) and B.Sc. (General) courses are becoming less and less important every year. Only those students who do not get good marks at the school level take up these courses and face a bleak future once they have graduated. Our main aim is to give these students a direction and help them get jobs after they finish their studies."

Fifteen new courses have been introduced in 41 Delhi colleges this year. These courses are: (A) **B.Sc. (General) Group**—1. Computer Science 2. Electronics 3. Instrumentation 4. Analytical Methods in Chemistry and Biochemistry 5. Industrial Chemistry 6. Agro-chemical and Pest Control 7. Environmental Science 8. Family and Child Welfare 9. Food Technology 10. Nutrition and Health Education; (B) **B.A. (Pass) Group**—1. Industrial Relations and Personnel Management 2. Entrepreneurship and Small Business 3. Business Data Processing 4. Office Management and Secretarial Practice 5. Insurance.

The University Grants Commission (UGC) scheme to introduce vocational courses on an all-India basis has been with the university for the last four years or so. But the response from other universities where efforts were made to introduce the scheme was not very encouraging. Delhi University this year decided to go ahead with these courses and got a tremendous response, far beyond the expectations of the university officials.

"We had to conduct a survey to pick up only those courses which could provide the students with the maximum number of job opportunities. Then, to prepare the syllabi we had to study the market requirements. For example, for the electronics course, we

Vocational courses at the undergraduate level are being introduced in Delhi University from this year. Prof Mohinder Singh, Dean of Colleges and mastermind behind their implementation, talks about the immense advantages of these courses and future prospects of students

went to various electronic concerns in Delhi and asked them questions about their needs. The idea was to prepare the students in such a way that they are easily accepted in these concerns. The same procedure was followed in other courses too. The syllabi have been prepared keeping in mind these requirements. Not only will these courses help students to get good jobs, but even those students who want to set up small business units at home will benefit," points out Prof Singh.

Within 12 weeks everything was ready alongwith permission to start these courses. UGC was also quick to respond and sanctioned Rs 40 lakhs a year for the courses.

According to the professor there are good job prospects for these students. "In some courses, there are more job opportunities than in others. I think Computer Sciences are going to be very popular in the

course in eight colleges. The fee has been kept the same as for the regular B.Sc. courses, for we want to encourage the bright but financially poor students to join them. I feel the whole thing is a kind of experiment. Whatever the success or the setbacks, the risks are worth taking. To me, success of a project is not the only measure, it's the direction we are giving to the students. If we feel that a particular course is of no use to the students, we'll not hesitate to discontinue it. But at the same time, it is a continuous process. We have to be on the lookout for new courses and update the existing ones. The university cannot afford to close its eyes to the changing needs of the times. If this happens, the whole scheme will be a failure and we'll go back to mass producing graduates without providing them with any future."

"We are also now trying to introduce at the B.Sc. (Hons) level a Physiotherapy course. We hope to start it by the next academic year. Another proposal under consideration is to make a computer course available as a subsidiary for the Physics (Hons) course, and Business Data Processing course as a subsidiary at the B.Com. (Hons) level. The purpose behind this proposal is to provide the honours students also with an opportunity to take any of these courses as subsidiaries as they will be more useful to them than studying the present subsidiary subjects," explains Prof Singh. He goes on to say, "These courses are a step towards the introduction of a new approach altogether—an interdisciplinary approach to make studies more practical and useful. How far teachers and heads of departments of various colleges are willing to cooperate with this new experiment is yet to be seen. But if the implementation of these new ideas is successful the whole education system in the Delhi University at least will undergo a revolutionary change."



Courtesy German Features

PIPES ON

Seven hundred years later too, the fabled Pied Piper of Hamelin pipes on. Hamelin continues to hold celebrations in honour of the mysterious rat-catcher who marched off with Hamelin's children to get back at the townsfolk when not paid for services rendered. Meanwhile, historians have been trying to assess the truth behind this fairy tale.

BETTER ENGLISH

BASICS OF ENGLISH-1

BY RAGHU BHATNAGAR & RAJUL BHARGAVA

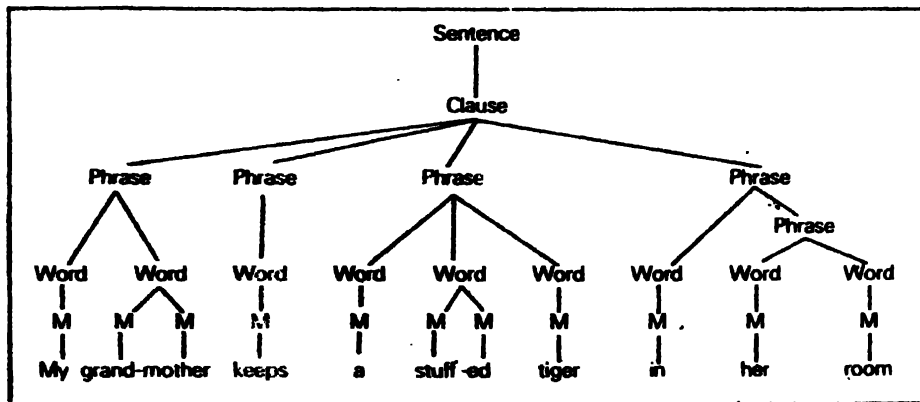
This year we introduce a new serial on grammar—beginning at the very beginning with Basics of English Grammar. In our forthcoming issues we will cover in detail all aspects and techniques of handling Reading Comprehension, Precis and Letter Writing, Paragraphs and Essays, with illustrative practice questions.

When one talks of grammar it is essentially about a set of rules for constructing and analysing sentences. Language use has these two aspects: synthesis and analysis. Analysis is based on what are called units of grammar. They are five in number and they constitute a hierarchy, which means that each unit of the higher rank consists of one or more of the units of the next lower rank.

Units of grammar

Sentence	— S (largest unit)
Clause	— Cl
Phrase	— P
Word	— W
Morpheme	— M (smallest unit)

Here is a diagram (called a tree diagram) which shows how these units are ordered:



[Note that the word 'stuffed' has two morphemes: *stuff* and *ed*. The word 'grandmother' also has two morphemes: *grand* and *mother*. In the latter both morphemes are independent words; in the former *stuff* is an independent word while *-ed* as a suffix is a morpheme which has meaning only when bound to an independent morpheme. All prefixes and suffixes are bound morphemes in this sense.]

Of the unit called the word, there are several morphemes. The chief among which are Nouns (N).

Verbs (V). Adjectives (Adj) and Adverbs (Adv). They are marked in the following sentences:

1. College education is very expensive.
N N V Adv Adj
now-a-days.
2. She said that her uncle wore glasses.
V N V N
3. The floods show no signs of abating.
N V N N

Two points emerge from the above examples. Some words which are not italicised have to be accounted for. They are of two kinds: In sentence 2, *She* is used in place of a noun and therefore it is as good as a noun (such words are called pronouns). Similarly *her* in the same sentence is roughly like an adjective. In place of *her uncle* one could have *old uncle*. On the other hand there are words like *that* (sentence 2), *the* and *of* (sentence 3) used primarily to help complete the structure of the sentence.

It is also evident that these words can be identified both formally and functionally. In addition to the formal and the functional criteria, there is also meaning which helps in identifying these word classes.

We will now discuss the types and structure of the first three units, viz, the sentence, the clause and the phrase.

Sentence Types/Patterns

Here we are thinking only of what are called simple or basic sentences. All other sentences are merely derivations or transformations of these sentences. They are 11 in number:

1. She is a teacher.
2. She is intelligent.

elements they take after them. The types of verbs alongwith their obligatory accompanying elements are the following:

1. Linking Verb (V_L) + Noun Phrase (NP)
2. Linking Verb (V_L) + Adjective Phrase (AdjP)
3. Linking Verb (V_L) + Adverb Phrase of Place (AdvP)
4. Intransitive Verb (V_I)
5. Intransitive Verb (V_I) + Prepositional Phrase (PP)
6. Intransitive Verb (V_I) + Noun Phrase (NP)
7. Transitive Verb (V_T) + Noun Phrase (NP)
8. Transitive Verb (V_T) + Noun Phrase (NP) + Noun Phrase (NP)
9. Transitive Verb (V_T) + Noun Phrase (NP) + Prepositional Phrase (PP)
10. Transitive Verb (V_T) + Noun Phrase (NP) + Noun Phrase (NP)
11. Transitive Verb (V_T) + Noun Phrase (NP) + Adjective Phrase (AdjP)

[A Linking Verb takes either a Noun/Adjective complement* or an Adverb of Place. An Intransitive Verb is that which does not take an object and therefore cannot be changed into the passive voice. A Transitive Verb is that which takes an object and therefore can be changed into the passive voice.]

Since the simple sentences are one-clause sentences, their structure is Noun Phrase + Verb Phrase (where *phrase* can comprise either one word or more than one word). We can represent it thus:

S → NP + VP

Clause Types

There can be many ways of looking at clause types. For example, we can have Finite Clauses or Non-finite Clauses. Take the following sentences:

1. It would be nice [if everybody came].
2. The nicest thing would be [for everybody to come].
3. [That everybody came] is amazing.
4. [Everybody's coming] is amazing.
5. [As she had to cook dinner], we finished work early.
6. [The dinner having been cooked], we started for the theatre early.

The bracketed clauses in 1, 3 and 5 are finite as they have a finite VP in them; whereas those in 2, 4 and 6 are non-finite as they have a non-finite VP in them.

Again clauses can be declarative, interrogative and imperative depending upon whether they are statements, questions or commands:

1. She will come late tonight. (Declarative)
2. (a) Will she come late tonight?
(b) Who will come late tonight? (Interrogative)
3. Get ready soon. (Imperative)

Finally, we may classify clauses into the following types:

1 Noun Clauses

1. [That she is intelligent] is recognised by everyone.

*A complement either identifies or describes a noun which may be either subject or object.

These sentence types have been formed on the basis of the types of verbs and the obligatory

2. Everyone recognises [that she is intelligent].
3. She told me [the clothes were wet].
4. She told me [that the clothes were wet].
5. [Who set the house on fire] is a mystery.
6. She told me [how she had managed to get a first].
7. I asked her [if/whether she was going to America].

All the bracketed clauses function as nouns.

II Adverbial Clauses

Clauses which function as adverbs (show or give **place, reason, time, purpose, condition, contrast**) are adverbials:

1. She danced [wherever she found an appropriate audience].
2. She did not go to college [because she was unwell].
3. [When the prime minister arrives] there is going to be a big celebration.
4. She gave me her pen [so that I could write the letter].
5. [If you come punctually], you will get an extra promotion.
6. [Although she lost], she played an exciting game.

III Relative Clauses

Relative Clauses begin with either a relative pronoun (who, whom, which, whose, that) or with relative adverbs (where, when, that):

1. Here is the boy [who won the cup].
2. Show me the watch [(which/that) you bought yesterday].
3. Is there anyone [that can accompany me to the station?]
4. That is the house [where I was born].
5. It was the year [(when) I was born].

IV Comparative Clauses

1. She is always spending more money [than she can earn].
2. This house is less airy [than the one we lived in last year].

V Prepositional Clauses

1. She was amazed [at what she saw].
2. There is no evidence [of who killed the tiger].

It must be noted that all the types described above are of **Subordinate Clauses**. There are also **Co-ordinate Clauses** which are mainly of three types:

1. She became lazy [and neglected her work].
2. She went to Bombay [but could not meet her uncle].
3. She was tired [so she lay down to rest].

Clauses can also be co-relative:

1. [Either the driver was careless] [or he did not see the cyclist].
2. The constable [both gave a shout] [and jumped to one side].
3. He [neither plays games] [nor does he go to the cinema].

Clause Structure

The structure of a clause consists of five elements:

Subject	— S (always an NP)
Verb	— V (always a VP)
Object	— O (always an NP)
Complement	— C (either an NP or an AdjP)
Adverbial	— A (either an AdvP or a PP; occasionally an NP)

These elements can have the following combinations depending upon the choice of verb:

1. SV She/was sleeping.
2. SVO She/wrote/a poem.
3. SVC She/is/a writer.

4. SVA She/is/pretty.
She/stood/on the table.
She/is/there.
5. SVOO She/wrote/me/several letters.
6. SVOC They/appointed/him/secretary.
They/proved/him/wrong.
7. SVOA She/put/the book/on the table.

Phrase Types

There are three types or classes of phrases: Noun Phrases (NP), Adjective Phrases (AdjP) and Adverb Phrases (AdvP), all of which have the same basic structure:

(M) H (Q)

Where H stands for head (noun in an NP, adjective in an AdjP and adverb in an AdvP), M for modifier(s) which precede the head and Q for qualifier(s), i.e., modifiers which follow the head. In the formula given above, M and Q have been put inside brackets. It means that they are optional elements. Thus H alone is the obligatory element without which there can be no phrase. Here is an example of a Noun Phrase:

Fresh fruit in the shop

M H Q

Fresh fruit

M H

Fruit in the shop

H Q

Fruit

H

Examples of the Adjective Phrase:

very beautiful indeed

M H Q

extremely hot

M H

kind enough

H Q

pretty

H

Examples of the Adverb Phrases:

very quickly indeed

M H Q

rather efficiently

M H

loudly enough

H Q

greedily

H

Besides these, we have two more types of phrases:

Prepositional Phrase (PP)

It will be seen that a prepositional phrase con-

sists of a preposition and a noun phrase, in the classroom:

Though we are going to discuss the Verb Phrase (VP) in greater detail a little later, it may be stated here that the basic structure of a VP is one or more Auxiliary elements (Aux) and the Main Verb (MV). Here are a few examples, using the verb **write**:

wrote	— MV
might write	— Aux MV
had written	— Aux MV
was writing	— Aux MV
was written	— Aux MV
might have written	— Aux Aux MV
might be writing	— Aux Aux MV
might be written	— Aux Aux MV
He had been writing	— Aux Aux MV
had been written	— Aux Aux MV
was being written	— Aux Aux MV
might have been writing	— Aux Aux Aux MV
writing	
might have been written	— Aux Aux Aux MV
written	
might be being written	— Aux Aux Aux MV
written	
had been being written	— Aux Aux Aux MV
written	
might have been being written	— Aux Aux Aux Aux MV
being written	MV

Let us now talk a little more about the Noun Phrase (NP) and the Verb Phrase (VP).

Noun Phrase

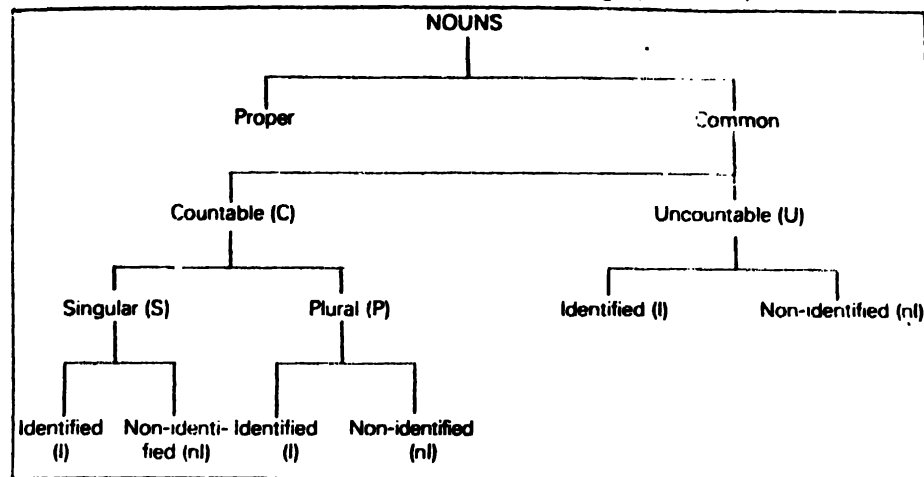
As we have seen, the basic structure of the Noun Phrase is (M) H (Q). Among the elements which function as modifiers (M), the following are the most frequent:

Determiners	— (a finite set of words which are so called because they determine or limit the noun that follows) [a, the, this, you, many, every, etc]
Numerals	— [three, thirty, first, etc]
Adjectives	— [good, green, weakest, Indian, etc]
Genitive Nouns	— [Ram's, India's, girl's, year's, etc]
Other Nouns	— [diamond as in diamond ring, garden as in garden umbrella, etc]

Of these, Determiners, as stated earlier, are a limited set of words. The following table lists the important Determiners:

Any kind of Noun	Uncountable Nouns or Countable Singular Nouns	Countable Singular Nouns	Uncountable Nouns	Uncountable Nouns or Countable Plural Nouns	Plural Nouns
the	this	a	much	some	these
may	that	an	little	more	those
your		each	a little	most	many
her		every	a good deal of	all (the)	few
his		either	a great deal of	a lot of	a few
its		neither		lots of	several
our		one		other	two, three, etc
their		another		enough	both (the)
which					
what					
whose					
whichever					
no					
some					
any					

It can be used with every type of noun. Of those listed here, what are called Articles (*a/an, the*) are the most important. As in the case of all other Determiners, their use also depends upon the kind of noun that follows. Nouns can be classified as given below:



We can interpret it thus:

Nouns are either Proper (Jaipur, John) or Common (table, chair, honey, milk). [Articles can be used only before common nouns.] Common nouns are either Countable (a noun before which *one, two, three*, etc. can be used as *table, house, dog*) or Uncountable (a noun before which *one, two, three*, etc. cannot be used as milk, rice, honesty, etc.). Countable nouns can be either Singular or Plural. Further all the three types of common nouns—Countable Singular, Countable Plural and Uncountable—can be either Identified or Non-identified.

Identification can be done in one of the following ways.

1. Previous Mention

I bought a pen and a pencil. The pencil was more expensive than the pen. (The second sentence refers to the pen and the pencil mentioned in the first sentence and therefore they are Identified)

2. Description

The police arrested the man who had stolen the car.

3. Uniqueness

He was looking at the sun.
He is the tallest boy in the class.

4. Class Reference

The dog is a faithful animal.
[Here *the dog* stands for the class of dogs.]
Everyone should help the blind.

5. Context

[Situation: the dining room]
Please pass me the salt.
[Situation: a house with a mango tree in it.]
Guest: When did you plant the mango tree?

Now it is possible to indicate which article goes with which kind of noun. All Identified nouns take *the* before them. Of the Non-identified nouns those that are Countable Singular take *a* or *an* depending upon the next sound, and the Countable and the Uncountable nouns take no article or the *zero* article before them. This information can be summarised as follows:

CSI	— the
CSni	— a/an
CPI	— the

the
zero

The constructions that occur at Q (as qualifiers) in a Noun Phrase are:

1. Prepositional Phrases.

The best girl (in the class)

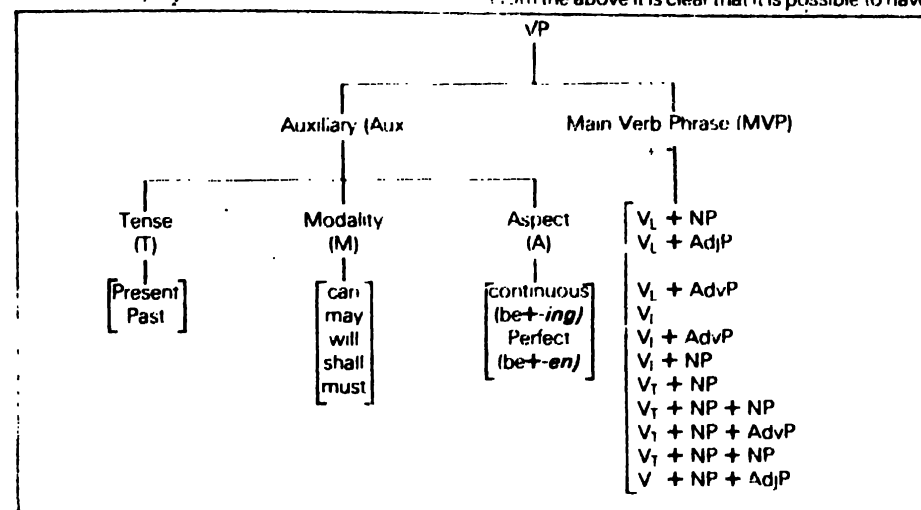
2. Relative Clauses:

A girl (whom I admire)

3. Adverbs:

The girl (upstairs)

Verb Phrase (VP)



Mention has been made earlier of the two parts of the Verb Phrase: the Auxiliary and the Main Verb. As was seen in the case of the sentence types listed earlier, the complete Verb Phrase has elements in addition to the Main Verb and in most cases these elements are obligatory, i.e., without them the sentence would not be complete. It is, therefore, more appropriate to say that the Verb Phrase consists of Auxiliary and the Main Verb Phrase (MVP) which would include both the Main Verb and the obligatory elements after it. Thus:

VP → Aux + MVP

The Auxiliary part has three components: Tense, Modality and Aspect. By Tense is meant one of the two forms that an English verb has to indicate time e.g. walk-walked; eat-ate.

By Modality is meant the way in which a speaker expresses his attitude towards a situation. In English this is usually done by using Modal auxiliaries like *can, may, shall, will, must*, and

other past tense forms. These auxiliaries express such concepts as ability, possibility, probability, permission, obligation, necessity etc. For example, *can* in the sentence *She can swim* denotes ability and *may* in *It may rain tonight* denotes probability or likelihood.

The term Aspect stands for the relationship between an activity and the passage of time, which may be either of completion implying current relevance or of duration. These two aspects (perfect and continuous) combine with features of Tense and Modality in the English Verb Phrase. Here are examples of the two aspects:

I have read the newspaper.
I had read the newspaper.
I will have read the newspaper etc. } Perfect Aspect
I am reading the newspaper.
I was reading the newspaper.
I will be reading the newspaper etc. } Continuous Aspect

Thus as structure of the Verb Phrase can be represented as shown in the table below.

It is thus obvious that in traditional terms what is called Tense is a mixture of all the three elements of the Auxiliary, viz. Tense, Modality and Aspect. For example in the Verb Phrase *may have been writing* we have all the three elements and yet according to common grammar the above phrase will be labelled as present perfect continuous tense. Its true analysis will be

may have be en writ ing
T + M A Perf A Cont MVP
from the above it is clear that it is possible to have

both the Perfect and the Continuous Aspects in the same Verb Phrase.

Given below are the diagrammatic analyses of some of the typical Verb Phrases.

1. The children cried.

T+MVP

2. She is laughing.

T+A(Cont) MVP

3. It may rain tonight

T+M MVP

4. She has telephoned her boss.

T+A(Perfect) MVP

5. They might be visiting friends.

T+M A(Cont) MVP

Before ending this discussion on the Verb
(Continued on page 66)

Answers to TEST YOUR WORD POWER

- aberration:** C: a deviation from the normal course; lapse. In Mrs Gandhi's time, violence was becoming something nearer a norm than a periodic aberration.
- apostle:** B: preacher; important advocate of a cause, espouser. Indira Priyadarshini, a favourite of the apostle of peace, Mahatma Gandhi, was a victim of violence of the worst kind.
- cog:** D: an unimportant part of a large enterprise; a minor person in a large organisation, movement. Sub-inspector Beant Singh and Constable Satwant Singh are probably just cogs in an ominously efficient machine.
- colossus:** C: immense person; anything gigantic or very powerful. For 16 long years, Indira Gandhi had straddled the most populous democracy in the world like a colossus.
- convalesce:** A: to regain health and strength after an illness. While the men were in prison, Kamala developed tuberculosis, so she was sent to Swireland to convalesce.
- cowardice:** B: faint-heartedness; lack of courage to face danger, difficulty, opposition. The senseless murder of a vulnerable PM is the worst form of cowardice.
- creed:** A: formulated system of beliefs or opinions, especially religious. Mrs Gandhi held together a vast and teeming nation of 750m people of differing races, languages and creeds.
- demure:** B: shy; quiet and serious; reserved; sedate. Indira Gandhi's mother Kamala was a demure and subservient woman who had been found for Nehru by his father.
- detonate:** A: to explode with a loud noise. Mrs Gandhi's decision to detonate the Indian nuclear device in 1974 won domestic praise but international criticism.
- errand:** B: short journey for simple business, i.e., to take or get something. At the age of 12, Indira Gandhi organised the Monkey Brigade - a children's army that ran errands and messages for the independence movement.
- frail:** A: delicate; fragile; weak. She was high-born, the daughter of an illustrious father, apparently frail and possessing the charm distilled from the valley of Kashmir and the mountains overlooking it.
- grit:** C: firmness of mind or spirit; quality of courage and endurance. Indira and Margaret came to be described as the only men in their cabinets, probably under the mistaken notion that courage and grit are the monopoly of men.
- huddle:** A: to crowd together; get together to confer. As the doctors struggled fruitlessly to save Mrs Gandhi, her Cabinet ministers huddled in small groups along the hospital corridors.
- impotent:** A: powerless; unable to act; ineffective. Indira Gandhi remade the Congress Party in her own image after split in 1969 and forced her would-be manipulators into impotent opposition.
- mandate:** D: authority given to representatives by voters; an instruction from an electorate to its representative, expressed by the results of an election. In 1971, Mrs Gandhi won a fresh mandate by a huge majority.
- paroxysm:** C: sudden and violent outburst. Within hours of Indira Gandhi's assassination, India was plunged into one of its worst paroxysms of sectarian violence since partition in 1947.
- polyglot:** D: speaking, writing in several languages; multilingual. Indira Gandhi kept a polyglot country together—and that was no mean feat.
- traumatic:** D: distressing and unforgettable. Mrs Gandhi's assassination and the communal bloodletting that followed it have been the most traumatic events since the partition riots and Mahatma Gandhi's assassination.
- vicissitude:** D: a sudden, unexpected change of fortune, i.e., changes from wealth to poverty, success to failure (almost always used in the plural). The daughter of Kamala and Jawaharlal Nehru, who had faced many a vicissitude in her life, met a most painful end.
- void:** B: empty space. The void left by the departure of a strong and dominating national leader will take considerable time to fill.

Vocabulary Ratings:

20-18 correct	exceptional
17-15 correct	excellent
14-12 correct	good

BETTER ENGLISH (Continued from page 65)

Phrase it may be useful to describe the English tense system in some detail. It is helpful to take up the tenses in pairs.

Three pairs are important.

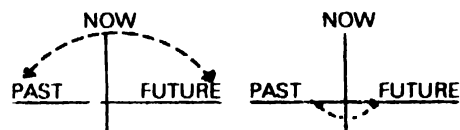
Present Simple — Present Continuous

Past Perfect — Present Perfect

Past Simple — Past Perfect

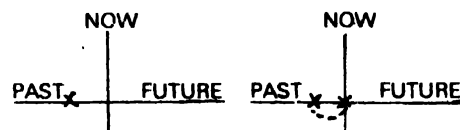
(As indicated earlier, the term Tense is being used in a wider sense.)

It is instructive to learn these tenses through simple time diagrams.



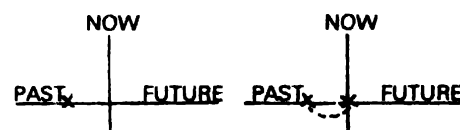
1. Simple Present

2. Present Continuous



3. Simple Past

4. Present Perfect



5. Simple Past

6. Past Perfect

A look at the first pair will show that the real present is indicated only by the Present Continuous tense, which stands for an activity, state, event or process going on at the time of speaking or writing. On the other hand, the Present Simple tense generally shows one of the following things.

- a professional activity
- a habit
- something general or regular
- something universal or eternal

As a rule the Continuous form is ideal for description and the Simple form for narration.

The second pair shows the difference between the Past Simple, which stands for anything in the past unrelated to the present, and the Present Perfect which also shows something in the past but relates it to the present. This relation is very often mental, i.e. it is felt to exist by the speaker or the writer.

The third pair, similarly, shows that whereas the Past Simple merely refers to some one thing in the past, the Past Perfect refers to two things in the past, one before the other, and the Past Perfect is used for the earlier thing. (This is obvious from the traditional example of the Past Perfect: The patient had died before the doctor arrived.)

As for the Future Time, the English Verb has no future tense form. There are a number of ways for referring to the future, the most important of which are the use of **shall**, **will** and **be + going to**. In modern English there is hardly any distinction between **shall** and **will**, except in judicial and legal pronouncements where **shall** is used for something mandatory. Wherever intention is involved, **going to** is the preferred form. However, **going to** also shows possibility or likelihood as in: It is going to rain.

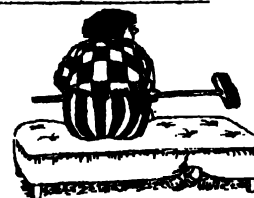
(To be continued)

WHAT 'R' LI'L GIRLS MADE OF?

Sugar and spice and everything nice—plus a lot of strength. Romanian scientists conducted a study on the daily activities of a housewife—and what did they come up with?

That a housewife walks 2,000 km a year if her movements in the house and shopping centres are taken into account. This includes 10,000 steps a day in her two-room flat. If the distance to and from her household plot is added to this, then the total goes up to 17,000 steps.

That a housewife handles about five tonnes of weight in a year, if all the utensils she



washes at home are weighed. The weight includes 18,000 spoons, forks and knives, 13,000 plates, 6,000 cups and saucers and 3,000 saucepans and frying pans.

In their report, which was published in the Soviet journal, *Smena*, the scientists claim they used special gadgets to make the super measurements. Weaker sex indeed!

Coffee Break



THE DAY AFTER

Planet earth would go into a permanent deep freeze, should a nuclear war take place in the Northern Hemisphere. That is the dire conclusion of a recent study by 80 US and European scientists, investigating for the first time the impact of nuclear war on earth's climate, atmosphere and ecosystem. The desire for the study goes back to 1971 when astronomers noted the effects of a dust storm on Mars—the fine dust particles blocked the sunlight and, as a result, Martian surface temperatures dropped rapidly. Volcanic ash has the same effect—in 1816, a mere 1°C drop in the world's average temperature caused it to be dubbed the 'year without a summer'. Based on these observations, the team predicts that the cloud of radioactive dust and soot, raised by nuclear explosions, would play havoc with the earth's ecosystem. For every nuclear megaton exploded, 1,00,000 tons of dust is sent up into the atmosphere. This dust and soot, added to the smoke from fires caused by the explosion, would effectively block out sunlight and plunge the Northern Hemisphere into a nuclear winter with sub-zero temperatures and continuous snowfall. Surface water would freeze, and surviving animals would die of thirst. The humankind, or whatever is left of it, would fare no better—lack of sunlight would put a stop to the photosynthesis process in plants, and crops would perish. The entire food chain would be disrupted, and the ecological balance disturbed.

That's not all. Exposure to radioactive fallout

The calamitous cloud

after a nuclear war would be greater than previously expected—in a baseline scenario of 5,000 megatons, about 30% of the Northern Hemisphere would receive a radioactive dose greater than 250 rads, while 50% would receive a long-term dose greater than 100 rads (100 rads = 1,000 medical X-rays). This increased exposure to radiation would lower the resistance of the human body to disease. Also, due to the injection of nitrogen oxides into the atmosphere, the ozone layer, which protects the stratosphere from ultraviolet rays (UV-B), would thin out. Though the dust and soot would absorb the ultraviolet radiation initially, in a few months, the UV-B doses would increase six times, further lowering the immunity level of the human body.

These effects would not be confined to the Northern Hemisphere alone—the radioactive dust and soot would spread southwards, accelerated by any minor disturbances in global circulation. Hardest hit by a reduction in sunlight would be the tropical forests which require continuous warmth and light. Moreover, the developing countries, dependent on vital food imports from the Northern Hemisphere, would suffer, as food output levels in the North would be drastically cut, due to the nuclear war. This sudden shortfall in food availability would lead to extension of area under cultivation, at the expense of forests, thus quickening the pace of deforestation.

Thus, misery, starvation, disease and mass

destruction of life and property would be the grim consequences of a nuclear war, and they wouldn't be confined to any one portion of the earth. It is a commonly held assumption among the scientists that 1.1 billion people would die outright in the first few hours of a major nuclear war and that another billion would die of the after-effects.

Says William Shirer, "Such a war will not last long and none will ever follow it. There will be no conquerors but only the charred bones of the dead on an uninhabited planet." Dire warning, indeed!

Ashish Jain, New Delhi

Booktalk

CHILLING & THRILLING

Then one night they came for her, dragged her from under the shelter of the branches where she had been bound, and pulled her into the great circle of red-painted faces under the flaring torches. In the middle was a stake, still with a white man's body on it. She could not see who it was.

"For a moment," she said later, "my heart failed me. I thought it was my turn."

Then her despair turned to anguish when she saw the man they were dragging out into the torchlight. It was her husband. He looked ghastly, with a terrible scar on his face.

"They dragged him across the circle right in front of me," said Mrs Fraser. "Four aborigines stood over him with upraised spears. I knew then that I had been brought there to witness his death."

Their eyes met for a moment. She tried to give him a smile of encouragement. She raised her hand to her quivering lips to send him her last kiss.

An agonising while later Captain Fraser died without uttering a cry, and that somehow made his wife proud, and defiant.

She knew the native word for "brave". She wrenched one hand free, and, pointing to her husband's body, she shouted the word over and over again at the top of her voice: "Brave! Brave! Brave!"

So run the adventures of one of the 11 survivors of the *Caroline* bound from London to Sydney.

Many other interesting episodes and escapades like the one mentioned above are found in *100 Great Adventures edited by John Canning: From the Dark Continent and across the globe to Sao Paulo on the Brazilian coast through deserts, oceans, the South Pole, India, China, Japan... the book takes one through over 600 pages of

*100 GREAT ADVENTURES: edited by John Canning; published by Rupa & Co. New Delhi, by arrangement with Souvenir press, Ltd., London; pages: 672; price: Rs 60.

excitement and thrills. Most of the adventures have been expeditions to remote and unknown areas in the world. These include the missionary ventures in *Sailing Of The Pilgrim Fathers, The Devil's Highway, Jesuit Missionaries In Latin America*, to name a few. *The Discovery Of India* by V. K. Rajwade, *The First Crossing Of South America* and *First At The North Pole* show the grit and bravery of the explorers who suffered hunger, disease and other hostilities to open up the world to others.

Women are no less than men when it comes to adventure and exploring. Mary Kingsley in her wanderings in West Africa came across a ceremony of the Egbos, an African secret society performing the rite of inducing their spirit to come out of the bushes and into his ark - a box. She stopped to watch knowing she risked death if caught. Amidst ecstatic shouting, dancing and beating of drums, the spirit was eventually persuaded into the box and it made a sound unlike any human voice. No less brave was Daisy Bates who studied several ethnic groups in South Australia. The tribesmen and their women were mostly cannibals, the women given to eating their newborn children.

Human endeavour is always interesting, more so, when an attempt to do the impossible is achieved. The space shuttle blasting off almost every month seems common these days but in the 1770s, flying for men seemed to be out of question. It was then that the Montgolfier brothers achieved the first flight by balloon. The building of the Suez Canal was no less a challenge, and Captain Webb had a tremendous experience swimming across the English Channel, taking 21 hours and 45 minutes.

Trove is full of good measure, are stories on excavations like the *Discovery Of The Rosetta Stone, Machu Picchu* and *The Tomb Of Tutankhamen*. While these may not be as pulsating as Campbell's record racing spree of 301.3 mph, the biographer describes Hans Schliemann's thrill in discovering Troy, "nine metres down, was a metal container, one metre square, with its copper top torn open. Inside it was what appeared to be a king's ransom."

For the war addicts, there are World War missions sketched out in vivid details. Some of these have perhaps appeared in old issues of *Reader's Digest*. Examples: *The Little Ships At Dunkirk*, *617 Squadron Bombs The Dams*, and *The Great Tokyo Spy-Fing*. Though criminals are no heroes, nevertheless, it cannot be denied that they lead an adventurous life. It is in this light that one enjoys *Dick Turpin*.

The book is an excellent collection of facts and provides an easy and interesting way of delving into the past. An index appended makes it simple to locate any particular anecdote or any other reference. However, going by the dictionary meaning of Great Adventure, the inclusion of mythological events like *Moses And The Promised Land*, *St. Francis Of Assisi*, etc., seem surprising as one can't place these as true human-life episodes. Even the *Origin Of The Red Cross* doesn't measure itself as a true adventure in that Dr Jean d'Annunzio never encountered peril or risked his life while rendering his service.

Yet, the book is engrossing, reasonably priced and useful not only to history students but practically anyone. Worth adding on to your book-shelf.

V. Niranjan, New Delhi

Extracts from the book:

WINSTON CHURCHILL'S DASH TO FREEDOM FROM THE BOERS

He crouched there in the ditch. It was dark and damp and strangely cold his muscles ached from their exertions, his mind from the problems which filled it. The hours crept by, his spirits sank.

Then it came. At first the sound was a swarm of insects, locusts perhaps, circling above him, somewhere in the distance. It was hard to tell, with a soft wind blowing, and the clatter and shouting from the railway station a furlong off.

It was not locusts: his spirits rose. The steel rails in front of him were beginning to crackle to chatter like ice in an English pond. And he saw the yellow headlight.

It was far away, a mile or more the other side of the station, but getting rapidly closer. Would it stop? If not, if it merely roared on towards him at fifty, sixty miles an hour, he stood no chance. If however, it stopped at the station, then it could



not have regained speed before it reached him: there was a chance that he might get aboard. A chance, too, that having flung himself aboard, he would not be discovered.

A chance, that having got aboard, undiscovered, he would find himself travelling in the right direction. He would need a lot of luck.

And luck seemed on his side, for even while he considered the odds against him, the train began to slow. He crouched still lower in the ditch, listening as it gasped and creaked to a halt, listening as heavy things were loaded, others taken off.

After five agonising minutes, the train started up. The rails began to chatter wildly a foot or so from his head, a great yellow light bore down on him and he forced himself harder into the side of the ditch, lest it illuminate him for his enemies. His heart was pounding in rhythm with the engine and, at last, just as the engine roared by, he raised his head.

A moment later, with a wild, despairing leap, he had clutched at the coupling between two carriages, was being dragged along, feet bouncing painfully among the rocks and stones of the permanent way. Another effort and he was sitting on the coupling.

When he recovered his breath he crawled along the carriage, managed to find a way in. Once inside, he found to his joy that it was loaded with empty coal sacks, black with dirt, but blissfully soft for a man to lie on. He went to sleep. There was still much to ponder and to worry, but it could wait.

Before we accompany a mud- and coal-stained Winston Churchill farther, let us consider how this young Englishman found himself in such a position.

He had gone to South Africa on the outbreak of the Boer War, as correspondent of the London *Morning Post*, having found he could make a great deal more money as writer than as junior officer in the British Army. He was not a rich man: he needed money, liked the things one did with it, playing polo, drinking champagne, buying books. He had given up the army and after a brief and unsuccessful flirtation with politics as a sideline to writing, he went out to South Africa.

Here he made the acquaintance of the incredible "Estcourt Armoured Train." This puffing juggernaut was designed to make its way along tracks across the veldt, roaring and helching its intention as it patrolled in search of enemy. The train had three wagons at one end, an engine more or less in the middle and two wagons on the other. The wagons held soldiers and one sported an ancient, muzzle-loading, 7-pounder gun.

With them, relishing the excitement and perhaps the absurdity of the patrol was the *Morning Post's* energetic young correspondent. No doubt, when the train was ambushed after 14 miles of noisy exploration, his spirits rose at the chance of seeing action, describing it for readers back in England.

But within minutes it became obvious that the ambush was no laughing matter, no subject for a jocular paragraph or two in the *Morning Post*. There was no question of shooting one's way out, reversing out of harm's way: the Boers, while keeping British heads down with a murderous rifle fire, were quietly sabotaging the line.

The train reversed, the wagons derailed, the driver panicked.

Winston Churchill was with him on the footplate and now he took charge, getting the frightened man to butt and shove the upturned

wagon at the end of the way. If he succeeded, at least the precious engine might be saved to roar and belch another day. The soldiers would have to retreat on foot.

With Churchill shouting instructions the line was cleared, the engine headed for home.

The intention was that it would keep within sight of the soldiers, but the driver was understandably in a hurry and soon the troops had been left far behind. Churchill made the driver stop, while he jumped from the footplate to go back, see how they were faring.

As feet hit the ground a bullet whistled past his ear. He began to run and the bullets seemed to follow. He had just made out the troops in the distance when a horseman appeared from nowhere, screamed at him and stopped the horse in a cloud of dust.

With a rifle aimed at his chest, Winston Churchill raised arms in surrender.

Soon he was in prison in Pretoria. As war correspondent he ranked as an officer and was placed with 60 of them in the "State Model Schools". These, in fact, were a single building set in a quadrangle and surrounded on two sides by an iron grille and on the other two by a wall 10 feet high. The wall was guarded from the inside, by sentries 50 yards apart.

With two officers Churchill drew up a plan of escape, and on the evening of Dec 12, 1899, it was put into effect. It depended on careful analysis of the times sentries passed a certain point from which, for a few seconds, they were unable to see a portion of the wall. The three of them—Churchill first, would hide themselves near this part of the wall (where, conveniently, there was a small lavatory hard against it) and then at the right moment clamber up via a ledge in the lavatory to lie flat along the wall's top. At the next suitable opportunity each man would drop on the far side, to freedom.

Churchill succeeded in getting on top of the wall—through a waistcoat button entangled with the ironwork, and nearly trapped him—and a second later he was outside.

But only now were his troubles beginning. The sentries had noticed something, the alarm had gone out and there was no question of the others joining him. In minutes the whole of Pretoria would be searching for him, and the other two explored him, in loud whispers, to come back over the wall while there was still time.

Even had he wished to, there was no means, no convenient lavatory, on this side. He was stranded in the middle of enemy territory without map or compass. These, together with the rations he and his companions had so carefully saved, were still in the prison, in the pockets of his friends. He had 75 pounds in money and four small bars of chocolate: he was 300 miles from the nearest sanctuary, the Portuguese seaport of Lourenco Marques.

No point in dithering—he walked into the night, boldly humming a tune and keeping to the middle of the road. There were a few burghers about, but they ignored him.

In a little while he had struck a railway line. With luck it would lead to Lourenco Marques, and was not the other one he had seen on the map, which led northwards, to Pietersburg? He walked along it in the dark for two hours till he came to a station, then prudently left the line, circled round behind the station and rejoined the railway 200 yards farther on. Here he crouched, waiting for a train.

As we have seen, he caught it—literally, clutching at it with both hands as it roared past in the night, and nearly dislocating his shoulder in the process. He went to sleep.

When he awoke it was still dark, and he had a raging thirst. He would have to get off at the first opportunity and find water, for the train could take days to reach a destination and in the meantime he might well die of thirst.

There was no sign of an impending halt, and Churchill now hurled himself off the moving train, a process even less pleasant than his embarkation. He landed in another ditch, bruised and shaken but still confident of success. A little later, as a hot and steamy dawn crept into the sky—for this was midsummer—he found water and drank like a camel to last for as many hours as possible.

He went on, but now, in daylight, it was less easy. Every bridge was guarded, every station full of men. He lay low for most of the day, started moving again at dusk. This was hazardous, for he had to creep much of the way like an animal, falling into bogs and swamps, wading waist-deep through streams.

Suddenly, looking out of the darkness on an unexpected siding, he found not one train, but three, all stationary.

Which one to take? It might be embarrassing, getting out at Pretoria.

The decision was taken for him: men approached and he tore off into the long grass of the veld.

Once out of earshot, he stood up straight, headed towards what seemed a village in the distance. He knew that the Kaffirs, the black men, hated the Boers, and if this were a Kaffir village he might be safe. On the other hand, it might belong to Boers.

It belonged to neither, it was a coalmine, with a few houses round the mouth. A number of these, he knew, were still run for the Boers by Englishmen. Carefully, he selected a door, beat against it.

There was a shout in Afrikaans and he replied loudly in English, saying he had an accident. A tall man with pale face and dark moustaches opened the door and faced him. Years later, Churchill described the encounter: "I am a burgher," I began. "I have had an accident. I was going to join my comrades at Komati Poort. I have fallen off the train. We were skylarking. I think I have dislocated my shoulder."

"It is astonishing how one thinks of these things. This story leapt out as if I had learnt it by heart."

He was in luck. The stranger had no need to swallow this improbable tale, for he was an Englishman, managing the Transvaal Collieries, and there could be no doubt that this dirty, English-speaking, individual was a compatriot. On learning that his guest was Winston Churchill, John Howard confirmed that soldiers had already been making inquiries, that 3,000 pictures of the absconded prisoner were already being distributed, that telegrams had been sent to every post office, every railway station, in the country. And of course there was a substantial reward—dead or alive.

The first thing, after feeding the fugitive, was to get him down the mine and Howard accompanied him in the little cage, operated from the surface by another Englishman, and took him to a spot underground where a mattress had already been provided, as well as candles, whisky and a

box of cigars. Wishing him a pleasant rest, Mr Howard was wound slowly to the surface.

Churchill slept—and when he awoke and tried to light the candles, found rats had eaten them. He sat there, in utter darkness, for many hours.

His incarceration lasted three days—not all of it in darkness, for more candles were sent down, with food. He was warned to tuck them away under the mattress while he slept.

At two o'clock on the morning of Dec 19, out in the blessed air again, he was led by his host to a railway wagon. It would be carrying wool to Lourenco Marques and had conveniently been delayed until the extensive police search of the mine and surroundings was over. The war correspondent of the *Morning Post* wriggled in among the wool as his host handed over food and cold tea. A little later the wagon was hooked up, moved off.

On the afternoon of the following day the train seemed to have reached Komati Poort, the last Boer town on the frontier.

This would be the most dangerous part of the whole escape. He was only a few miles from freedom, but with every likelihood that police and customs would search the train. Some did, and he lay flat on his face, covered with sacking for many hours before the train pulled out of the station.

But now there was the nagging suspicion: had that stop been Komati Poort? After all, he hadn't dared look out and see. If it had been—he was safely over the frontier. If not—the horrors of train inspection were ahead.

Then—to his almost uncontrollable joy—he saw Portuguese uniforms at the next stop, saw them through a chink in the wagon. He forced himself to remain hidden, but when the train was on the move again he went wild with joy, leaning out of the wagon, shouting and singing, firing his revolver.

And late that afternoon the train reached Lourenco Marques. There was still a chance of Boer sympathisers arresting or kidnapping him, and he made his way carefully, mingling with the loafers, "which my slovenly and unkempt appearance well fitted me to do", till he discovered the British consulate. Here he was brusquely ordered off, but caused such a disturbance that the great man himself came downstairs to see him. A moment later, identity established, the war correspondent was inside and safe.

Churchill had guts and determination and vision, and almost everything else as well: one of these was luck. The train on which he had been secreted—by the only man likely to have helped him—ran in conjunction with the weekly steamer from Lourenco Marques to Durban. After an excellent dinner and escorted by "patriotic Englishmen" determined to get him to safety, he was put aboard that steamer. An hour later it had sailed, and a few days after that he was back in Durban, already, thanks to the electric telegraph, a world hero.

His luck stayed with him. With the war as good as won, he was invited back to England to stand again for Parliament, in the Oldham constituency which had already rejected him. A universal hero, he need hardly have bothered to campaign, but he did, and was able to point out to a rapturous audience that the gentleman who had so skilfully wound him to the bottom of a mine in the Transvaal was none other than Mr Dewsnap—of Oldham.

The audience went wild.

GUIDE TO GOOD GROOMING

What suits you

If you're Tall

You have a head start—make the most of it. If you're also lean, you might choose your colours, designs and accessories to add dimension.

Fabric

Plains, checks, stripes—anything goes. If you're also slim—light shades create an illusion of breadth. Wide-eyed checks and spaced stripes give narrow shoulders width.

Single-breasted worn unbuttoned drape elegantly on a tall frame. Double-breasted give you a nice chest—just the thing! Trousers cut on the straight, with pleats or without—and you can get away with turn-ups! Loosely fitting shirts with rounded collars; and, if you're lean, a run of gathers at the back.



Sharp angles should be rounded off where possible. Jackets and trousers cut on the straight, slightly contoured to the figure.

Accessories

Snub-nosed shoes are the right footnote. You can sport a broad tie with panache and flourish a pocket handkerchief.

Putting it all together

In any ensemble a pleasing balance is achieved by having one element strong, one subdued, one neutral.

A plain suit gives you a carte blanche. The perfect foil for a patterned tie, paisley, geometric, abstract. With matching pocket square, or one that picks up the tie's keynote colour.

A suit with a fine stripe invites diagonals—a tie with a thicker or denser stripe, an interesting counter-play.

In coordinates of various combinations, the accents vary.

The sports jacket is the unabashed showpiece of an ensemble. The trouser is the neutraliser. Tie and links must be decidedly subdued, just camp followers.

With the blazer, the slim club tie or a bright plain one with a small motif completes an elegant picture. The casual look, instead, asks for just a bright touch of handkerchief knotted breezily about the neck or tucked in at the pocket.

An ensemble is essentially two-colour harmony. In plain contrasted coordinates where jacket and trousers fall in the same colour band, tie and accessories can introduce some excitement. Thus with a navy jacket on grey slacks, a dark wine tie makes a heady highlight. When jacket and trouser represent a colour contrast, tie and accessories must tone in. A

If you're not

There are many ways of walking tall. But everything must be made to add UP. And if you're broad as well, to streamline.

Fabric

Narrow stripes create verticals. Thus a pencil stripe gives an impression of length. Large checks may add to your account, but they're inch reducers. Deeper hues have a neat compactness that trims a broad frame.



Jackets with narrow lapels are just what the designer ordered. Padded shoulders would make you look stocky. Make your trousers minus pleats with slimmer trouser legs. Wide-bottomed trousers are out. Also, give turn-ups the thumbs down. Shirts should be tapered to body lines.



Jackets and trousers should be shaped at the waist and calf respectively to create a more elongated, trimmer profile.

Accessories

Shoes with a built-up heel give you a leg up. Ties and links should be modest. Give pocket handkerchiefs a miss.

deeper or lighter tint of one of the paired colours. Or a neutral like pearl, mushroom, sand-beige, silver grey. Even with a delicate print.



How to get a good fit

Of course, the first step is to go to the right tailor. But you also have something to do with it.

Do's and Don'ts when being measured

■ Keep your wallet and keys in your pocket and your belt on. Since this is how you will

eventually wear your suit, the tailor will be able to allow the right leeway.

■ Don't stand stiffly to attention, stand at ease, slouching a little as you normally do.

Do's and Don'ts when you take a trial

■ Check for horizontal ripples below the base of the neck. This indicates that the material must be cut across the top of the shoulder. If tension lines appear across the shoulder blades, it means the back is too tight and needs letting out a bit.

■ To decide whether your jacket fits (whether it is straight or shaped), button it up and watch for the X-shaped lines that form the button. If they are too pronounced, the waist must be let out. Horizontal wrinkles at the back of the jacket also mean the waist is too pinched.

■ To make sure that your trousers fit well, stand and sit. They must be comfortable and not too tight at the thigh when you sit.

A checklist for your tailor

■ At least half an inch of the shirt collar should show above the jacket. This looks smart and ensures that the jacket hangs well.

■ Jacket sleeves should be fuller at the top and taper down; half an inch of the shirt cuff should be visible.

■ The jacket must cover the seat completely, though slight variations in length are acceptable.

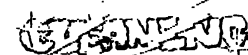
■ The second button should be at the waist or slightly higher.

■ The trousers should be one centimetre above the ground, to prevent fraying.

A dress rehearsal

A moment of truth. Lay out shoes, socks, handkerchief, tie together. Well-matched indeed. Now put them on and give yourself a top-to-toe once-over because the final answer is in your full-length mirror.

The right care Lengthens wear



Do not wash or bleach because this could spoil the feel and finish of the fabric. Dry clean with perchloroethylene or white spirit.

PRESSING

Do not press the garment directly with a hot iron. Always place a fine muslin cloth which has been dampened over the garment and then iron.

KEEPING

Clothes-brush your suit before and after use. Put it in a plastic cover on a hanger or keep folded lightly. Strew cupboard with mothballs. Extras: Slim fob watches. Jewellery lighters. Heavy signet rings. Elegant tie pins.

How to colour match

Combining is never as simple as it looks. As patterns can chime or clag like cymbals, colours can blend or clash. The colour guide on the centrespread can help you to happy matches. Having made a well-considered selection of suiting, shirting, tie, handkerchief, socks, shoes, lay them all out together. Spare a minute to check against our guide that you've teamed them right.

Courtesy The Raymond's Fashion Guide

Sports Quiz-38

BY NAROTTAM PURI

WIN Rs 100 IN BOOKS

1. Name the three England bowlers who have captured more than 300 Test wickets.
2. When and where did the West Indies lose their last Test series?
3. What will the new form of cricket being introduced by the Australian Cricket Board be called?
4. What do Frank Weineke, Hitoshi Saito and Yasuhiro Yamashita have in common?
5. In which four events did Jesse Owens win gold at the 1936 Olympics?
6. And what events did Carl Lewis win in 1984?

PRIZES

SPORTS QUIZ-38:

2 First Prizes

Sports books worth Rs 50 each from **Rupa & Co., New Delhi** to the first two *all-correct* entries (or *one-error* entries if there are no all-corrects) pulled out of the hat.

Plus 5 Consolation Prizes worth Rs 20 each from **Rupa & Co.**

KENWORDS-38:

2 First Prizes

100 Great Adventures from **Rupa & Co., New Delhi** to the first two *all-correct* entries (or *one-error* entries if there are no all-corrects) pulled out of the hat.

Plus 5 Consolation Prizes—Arthur Hailey's **Strong Medicine** from **Rupa & Co.**

HOW TO ENTER

● Print the answers neatly in capital letters along with your name, age and address. Each crossword must be pasted/clipped to a larger piece of paper.

● You may send in any number of entries, but each must be numbered accordingly and accompanied with its respective COUPON.

● Though all your entries will be included in the draw of lots, you will be entitled to only one prize—the highest in case you're getting more than one.

Closing date for the two contests: January 25.

Address your entries to: The Editor, Career & Competition Times, 10 Daryaganj, New Delhi-110 002.

Solutions to this issue's contests will be published in March '85.

**SPORTS QUIZ
COUPON**

**KENWORDS
COUPON**

Kenwords-38

BY RANI P. SOMAN

WIN RUPA PAPERBACKS

ACROSS

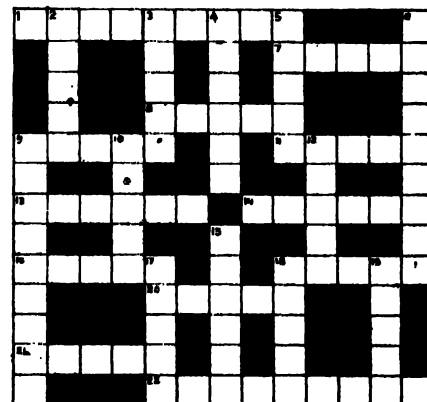
1. The exclusive right to reproduce a literary, dramatic, musical or any artistic work (9).
7. The Swiss mathematician, who invented the use of the symbol 'e' for natural logarithmic base, also regarded as the founder of pure maths (5).
8. A north-east Italian river that rises in the Alps of Tyrol and enters the Adriatic north of Po delta (5).
9. A German chemist Nobel Laureate of 1918, known for the discovery of a method for producing (synthetic) ammonia (5).
11. The injection of liquid medicine into the rectum (5).
13. A Scottish mathematician, the inventor of logarithms, who also recommended salt as a fertiliser in agriculture (6).
14. An insect, order 'Dermoptera', wrongly believed to creep into the ears of sleeping persons (6).
16. A poet and dramatist, Senator of the Irish free state, a Nobel prize winner in Literature, 1923, works include *The Tower* and *Deirdre* (5).
18. The Italian river, on the banks of which Romulus and Remus (legendary founders of Rome) were found abandoned (5).
20. The Cadbury's depend on this evergreen tree, found in the tropics, for most of their products (5).
21. The character made immortal by Clark Gable (5).
22. English novelist born in Calcutta, India, established his literary reputation with his book *Vanity Fair* (9).

DOWN

2. Drama integrated with vocal and usually instrumental music, the first of which was produced at Florence in 1597 called *La Dafne* (5).
3. Electronic device for locating objects at a

distance; equipment consisting of a powerful transistor, a receiver and a cathode ray tube (5).

4. The heavenly twins (6).
5. An American Indian tent formed of skins, etc. stretched over a frame of converging poles (5).
6. Famous square in London, commemorating Nelson's victory in 1805 (9).
9. A machinist with Edison & Co., who founded a motor company in Detroit in 1903 and subsequently became the world's second richest man (5, 4).
10. Marian Evans, regarded as one of the greatest writers of Victorian fiction, wrote under this pseudonym (5).
12. Italian architect and civil engineer who designed Palazzo dello Sport in Rome for the 1960 Olympic Games (5).
15. A gap, an intercellular space, a cavity of a depression in a pitted surface (6).
17. The English novelist and poet who attained success with his first novel *Waverley* and followed it up with *Ivanhoe*, *Pride Of Lammermoor*, etc (5).
18. Siberian region adjoining the Chinese frontier city with the same name is, on the River Tom (5).
19. A town in west Australia, known for its artesian wells, close to the boundary of south Australia on Transcontinental Railways (5).



SOLUTIONS... SOLUTIONS... SOLUTIONS

SPORTS QUIZ-36

1. 1978
2. Bob Hewitt & Frew McMillan
3. Fred Perry (1936)
4. One—in the first round to Paul McNamee
5. Seven—Gavaskar, Sobers, Boycott, Cowdrey, Hammond, Chappell & Lloyd
6. The Pauley Pavilion
7. Sir Donald Bradman

Winners

First Prize (all-correct): 1. Prem Lata Goenka, Sitamarhi (Bihar). 2. S. Shivram, New Delhi

Consolation Prize (all-correct): 1. R. Saratha, Kallakurichi. 2. S. Vasantha Kumar, Bangalore. 3. Haraswarthy, Mysore. 4. Ujjal Banerjee, Bhusawal. 5. Amitava Das Gupta, Calcutta.

Prizes awarded by

Rupa & Co

3831, Pataudi House Road, Daryaganj, New Delhi-110 002

KENWORDS-36

Across: 1. Archipelago 7. Ode 8. Yah 9. F. Castro 11. Balsam 12. Spores 14. Nemesis 15. Erg 17. CID 18. Verkhyansk

Down: 2. Roe 3. Pepsin 4. Gay 5. Mouribaten 6. Thomas Hardy 9. Fission 10. Osmosis 13. Fresco 16. GRE 17. CDS

Winners

First Prize (all-correct): 1. Om Prakash Ojha, Mussoorie. 2. G. Satish Raju, IIT Kharagpur

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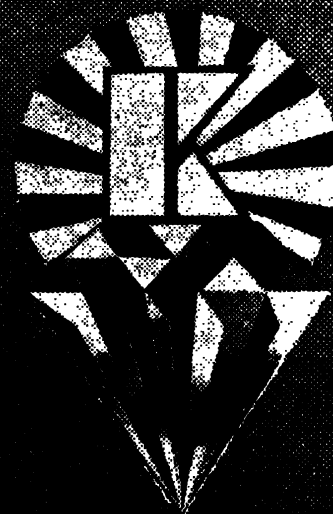
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From The Club Desk

We're back again to help all you enterprising young folks come together through your very own CCTimes Clubs. And this time we hope we'll be there to render our assistance and advice to you whenever and wherever you need it. We regret the slight lapse that occurred in our communications with you but circumstances beyond our reach caused this—much against our wishes, of course.

In the meantime, correspondence from your side has continued unabated—a very heartening sign indeed because it goes to show unceasing enthusiasm on your part. The number of CCTimes Clubs all over the country has gone up too.

Several of our readers have sent in letters asking about how to form a CCTimes Club, the rules, regulations, activities of such a club, the minimum number of members required to form a club and so on. Once and for all, we'd like to simultaneously resolve your queries. The CCTimes Club is formed exclusively by your own efforts and initiative. So if you're preparing for any competition in any field whatsoever and are eager to share your opinions, views, experiences with others like you in your own locality, school, college or city then go right ahead and form a CCTimes Club—and don't count your members. You can have any number.

As members of such a club you can organise activities like debates, discussions, quiz contests on various subjects. And while increasing your general knowledge and developing your all-round personality, you'll at the same time be developing qualities of leadership and organisation as well. Our contribution will be providing you with assistance and guidelines on any specific problems you encounter. For example, if you're planning to hold a debate contest and find you need some 'thought-provoking' topics, we'll be glad to supply it to you. And you can keep us informed of all the activities your club organises (accompanied by black and white photographs, if possible), and we'll provide you with adequate coverage in our magazine. The most active and enterprising club will be awarded the 'Club of the Month' title too! Also, all club members who win any CCTimes contest will receive an extra bonus prize—provided you quote your membership number.

Once you have formed a club, send us the name and address of the club (you can conduct your club's activities in premises mutually convenient to all the members of your club), names of the members and we will issue membership cards. If you've already sent us these and not received your membership cards yet, rest assured you'll be receiving them soon. We've already despatched them upto the letter 'I'. Many of our readers have asked for the names and addresses of CCTimes Clubs in their towns. For their convenience we have been publishing the list alphabetically. In this issue we continue with the letters 'B' and 'C'.

So come on, energise yourselves, form new CCTimes Clubs and if you're already members then activate your clubs and we too will do all we can to make your endeavours successful—that's a promise. Do keep writing in to us at: The CCTimes Club Desk, C/o Career & Competition Times, 10, Daryaganj, New Delhi-110 002.

THE LETTER 'B'

Bhubaneswar

1. CCTimes Club,
Kalandi Charan Tripathy, 67, Budheswar
Colony, Bhubaneswar-751 006.
President/Secretary: Siddhartha Patnayak
Membership (M) No. B-4
2. Intellectual Club,
Gr. No. 2R-107, Unit 6, Bhubaneswar.
President/Secretary: Bhiswal Khirad
M. No. B-4/1
3. Swapna CCTimes Club,
Gr. No. VR 2/1, Unit 2, Ashoka Nagar,
Bhubaneswar-751 001.
President/Secretary: Nirendra Nath Sahoo
M. No. B-4/2

Bhind

1. CCTimes Club,
C/o Dr B.M. Dubey, Sader Bazar Gohad,
Distt. Bhind, P.O. Gohad-477 116.
President/Secretary: R.K. Dubey
M. No. B-7

CCTimes Club,
Room No. 5268, Hostel No. 5, MACT,
Bhopal-462 007.
President/Secretary: Neeraj Shukla
M. No. B-8

Bijnor

1. CCTimes Club,
C/o Dr Mirza Nursing Home, P.O. Besi Kirat-

pur. Distt. Bijnor-246 731.
President/Secretary: Arvind Rastogi
M. No. B-9

2. Cygnet Club,
14, Putton Bhoj Apartment., New Basti,
Bijnor.
President/Secretary: A E. Zuberi
M. No. B-9/1

Bhojpur

1. CCTimes Club,
C/o S. Misra, H. Pandey's House, Club Road,
Arrah (Bhojpur)-802 301.
President/Secretary: Prashant Kumar
Mishra
M. No. B-10

Banda

1. CCTimes Club,
S.C. Chaurasia, Advocate 'Organiser', Kotwali
Road, Banda-210 001.

HEADY PUBLICITY

In these columns of our August issue, we had published information about the German Dermalpunktur massage roller which cures migraine. Since many of our readers have shown interest in the roller, we give below the manufacturer's address, who may be contacted for further details:

ELMATRON GmbH
Postfach 40
D-6209 Heidenrod-Kemmel
Federal Republic of Germany.

M. No. B-11

Bareilly

1. CCTimes Club,
159, Madhi Nath Road, Bareilly-243 001.
President/Secretary: Ajai Kumar Asthena
M. No. B-12

1. CCTimes Club,
1136-N/4 'D' Sector, Piplani, BHEL Bhopal-
462 021.
President/Secretary: Shyam Jai Singhani
M. No. B-13

Bijni

1. Study CCTimes Club,
Badal Krishna Ray, 1, B.K. Road, Bijni-
783 390.
President/Secretary: Badal Krishna Ray
M. No. B-14

Bilaspur

1. CCTimes Club,
H/o G.L. Sharma, Shiv. Ghat, Sarkanda,
Bilaspur-495 001.
President/Secretary: Mukul Kulshreshtha
M. No. B-15

Belgaum

1. CCTimes Club,
Rajendra C. Shirodkar 43/12, Panaji Lane,
Belgaum-590 001.
President/Secretary: Rajendra Shirodkar
M. No. B-16

THE LETTER 'C'

Calcutta

1. CCTimes Club,
North Calcutta Chapter, Feeder Road,
Ariadaha Post Office Bldg. Calcutta-
700 057.
President/Secretary: Arun Kumar Basu
M. No. C-1
2. CCTimes Club,
H-238, Netaji Colony, Calcutta-
700 090.
President/Secretary: Ashish Kumar Sarkar
M. No. C-1/1

Calicut

1. CCTimes Club,
19/1088, Anoth Colony, Chalapuram,
Calicut-2.
President/Secretary: K. Krishna Kishore
M. No. C-2

Cuttack

1. CCTimes Club,
C/o Kali Prasad Misra, Co-Axial Station
Telephone Bhavan, Cuttack-753 001.
President/Secretary: Ranjit Prasad Misra
M. No. C-3

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India in '84: Highs And Lows

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LETTERS

Kettle Calling The Pot Black

The issue of Parliamentary vs Presidential system is being much debated. According to me a system never fails in itself. Regional controversies, corruption, nepotism, separatist tendencies, poverty are not the frailties of a system but are caused more by the people themselves. Blaming the system is a case of the kettle calling the pot black. Besides, one cannot easily shed a government like a cloak. Can we change a system which is in the grip of corrupt leaders?

Anju D. Wadhwa, Nagpur

Best Letter: Rs 40

The 'P' Game

First I was a P (Pilot). Then I became an MP. Subsequently, there was a clash between the M and the P. P succeeded and I became PM!

P.V. Subba Rao, Guntakal (AP)

A New Beginning

It is not *The End Of An Era* (Dec'84) but the beginning of one to culminate violence, apathy and disbelief and to usher in not the presidential form of government but a good government.

S.K. Mehta, Dehra Dun

The madness which spread all over the country following Mrs Gandhi's assassination was rather unfortunate. Should an entire community suffer for the misdeeds of a few individuals? I still remember one elderly Sikh who was serving the public by taking care of their shoes, free of cost, at Rajghat, on Oct 2. How can one claim that all Sikhs are separatists?

Subrat, New Delhi

Indira is not India now, a fanatic made all the difference.

A.K. Malla, Sangram Pura Sopore (J&K)

The December issue very deftly covered the whole life of our late prime minister—the most dynamic leader India had

Rajeev Ghai, Setna (MP)

Unfaithfully Yours

The year's biggest casualties have been hope and trust.

Bhooshan Shende, Nagpur

Let The Planet Live

Environmental Pollution (Dec'84), is the greatest enemy of mankind. All the lectures by our leaders in the UN and elsewhere, on environment won't help. We have to act fast to crush this man-made enemy.

Anish M. Dave, Ahmedabad

Mutual Co-existence

The need of the hour is not confrontation, but collaboration. It's high time we the citizens of India realised this, and took steps to curb any problem which is a threat to communal harmony. The only way to exist in today's world is to co-exist.

Bismaya Mahapatra, Bhubaneswar

Our country is passing through a critical phase. It

Act(ive) Role

Today, the film industry is apparently becoming a coaching class for future politicians as more and more actors and actresses are trying to play an active role in the political cinema. No one would have grudged this new trend if the actors were trained to become progressive national leaders who would sincerely work for the country's development. But unfortunately they are only trained to become on-the-spot vote catchers.

Nisha Gandhi, Rajkot

Prize-winning Letter: Rs 25

seems the Westminster coast does not suit our political set-up. It is high time we got rid of a system that builds capitalism in the name of socialism; a system that practises communalism in the name of secularism, a system that disintegrates the nation in the name of integration. Let us have a new result-oriented system of government which can ensure Justice, Liberty, Equality and Fraternity.

Narendra Nath Mehra, Ajmer

Timely Guidance

Thanks for the guidance provided by *CCTimes*. I have been appointed as Probationary Officer in Syndicate Bank. With the help of your invaluable issues (Sep'83, Feb'84 & May'84) my interview went off well and was very interesting.

Randhir Singh, Chandigarh

Energising India

Your editorial comments on the role of students in society (*Hello Folks*, Nov'84) were timely. Some political parties occasionally allow the members of their student wings to resort to violence for their own short-term gains. Consequently the members of these organisations at times behave like stormtroopers and the parent political parties look on helplessly. The need for channelising the energies of the students for the benefit of the country is more today than ever before. Political parties should not only train the members of their student wings in leadership but also utilise their services for promotion of national integration, communal harmony and nation-building activities.

A.R. Srinivasa Rao, Hyderabad

Do we face an energy crisis? Not in India with its millions of youngsters. "You've enough atomic energy within you to blow up the city of New York," says Vincent Peale, for youngsters. In the International Year of the Youth, it is imperative to channelise this young energy for creative and useful purposes. Anger, violence and idleness, must be replaced by patience, fortitude and hard work.

Ali Akber Teharally, Madras

'Publicising' The Government Schools

Public schools (Nov'84) have several plus points in their educational system that outweigh the minus ones. Government schools, instead of pointedly accusing the public schools for 'creating a wide disparity', should lay emphasis on the all-round development of a child's personality. This will enable the child to cope with the advanced academic curriculum

chalked out for one and all. In order to rid the general masses, barring a few, of a deeply etched inferiority complex the government should adopt measures along the lines of public schools.

Nabaneeta Sahu, Burla

I wonder if there is any chance of bettering the government schools. With the majority of our masses poor and illiterate, the government should direct its resources in providing at least a bare minimum of educational requirements, instead of bettering the existing schools.

Moony, Rourkela

Away With Inequality

The Gujarat Government has offered to provide free education to girls studying at the Higher Secondary or degree levels. But why is there a discrimination against boys?

Yatin Dhirajlal Gandhi, Rajkot

The appointing authorities who issue application forms for various posts should see that information on 'caste' and 'religion' are not sought from the applicants and equal opportunity is given to one and all.

Vinayadatt V. Kohir, Gulbarga

An Election Stunt?

Recently, the Gujarat Government introduced a scheme for supplying vitamin nourished food to primary school children at the cost of Rs 110 crores. The motive behind this scheme was to provide encouragement to school going children. But there are schools in the state where even basic amenities like drinking water, ventilation etc are not available. Some of the schools do not even have a proper building.

Why this expenditure at the cost of public revenue? Is it an election stunt?

A.B. Vandiwalla, Vadodra

Errata

The Colombo Conference of the PMs of Burma, Ceylon, India, Indonesia and Pakistan recognising the principles of Panchsheel was held from April 28-May 2, 1954 and not 1984 as wrongly stated under the columns of G.K.

Current Events: International wrongly state that US President Ronald Reagan has been elected for another five-year term. The term of a US President is four years, not five.

The errors are regretted—Editor.

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Your letters should be legibly written/typed, not exceed 200 words and include your full name and address. We may edit them for purposes of clarity or space.

Hello folks...



Ramesh had just completed his graduation, and was already a bundle of nerves. Reason: the fast approaching Civil Services Exams which were just six months away. He had never realised there would be so much to study, to understand. He found an enormous amount of reading material but very little time at his disposal. Whenever he sat down at his desk, he was unable to decide on what to begin with.

His friend, Vikas, who was his classmate, was also appearing for the same exam. He did not seem as bothered and spent much more time in relaxing, going to the movies or shopping. Ramesh and Vikas met each other by chance one day and Vikas offered to take Ramesh home and discuss his problem.

"Time is one factor which has been distributed equally between everyone," explained Vikas to Ramesh. "And you know there are people who run the whole country during these 24 hours and those who cannot read 10 pages in the same time." He discussed with Ramesh the art of time management and how he could achieve the maximum in a limited time period. He also suggested a book *Successful Time Management Methods* by R. Alec Mackenzie published by Vision Books, New Delhi.

Time management is nothing but dividing the 24-hour day and allocating time periods for various uses in such a way that maximum output can be achieved. A person who can manage his time successfully not only gets the maximum out of the day, but also finds time to relax, read and meet people. Time management can be divided into three stages:

The first stage is to find out how a per-

son is spending most of his time. Peter Drucker, the father of modern management studies, advocated the use of the time log. The time log should be a daily log of activities for at least two weeks. After this period, the entire time log should be critically analysed to find out how the days were spent. It will reveal how much time was consumed by various activities during the day and bring to notice several 'time-wasters' which prevent a person from working in the minimum possible time. These time-wasters are either external or internal. You have little control over external time-wasters. For example, if there is a sudden electricity failure or a friend drops in whether welcome or not. You, however, have sufficient control on internal time-wasters like a disorganised desk, unnecessary involvement in routine matters, spending much more time on a particular work than required, inability to decide what to do, and working at a slow pace.

The time log will also reveal that time-wasters are inter-related. For example, when you are not able to decide on what to do, you try to do several things and leave them half-finished, or because of a disorganised desk are unable to find the appropriate papers. Very few people take the trouble to identify their time-wasters. The first positive step towards effective management will be to precisely identify areas where you waste time.

The second stage is preparing a time schedule which will indicate the way you wish to spend your time. Before planning your schedule it is necessary to keep three things in mind: One, time estimates should not be unrealistic. It is a common practice to assign less time to a work than it takes. We do not estimate our ability to complete the work. Successful time planning requires a realistic appraisal of our capabilities. The second important thing is that you should not trust your memory too much. We tend to feel that various ideas which come to our mind will be retained by us. However, we seldom remember most of them. It is, therefore, necessary that you should take the trouble to jot down these ideas. The third important thing is that you should not make sketchy notes in your time schedule. Making entries in general terms is sometimes confusing. The main points or major details should be recorded.

Making a time schedule, i.e., the art of

dividing time among various activities, is the third stage. Its first principle is that you should lay down a priority system and clearly chart out the order of importance. Then, keeping in view your working ability and capacity, you should assign a certain amount of time to it. This way you can prepare a time schedule for one week. At the beginning of the day, you should spend 15-20 minutes to study the time schedule and remember that day's schedule. At the end of the day, it is better to spend 20 minutes on planning for the next day.

What has been suggested here is a basic idea, for many details of time scheduling cannot be laid down. It is a very personalised thing and every person will prepare his time schedule in an entirely different way. However, if you carefully maintain a time log for a few months, you should precisely identify the time-wasters and on the basis of that and according to the priority, prepare the time schedule. A perfect time schedule could be prepared in probably three months time. Once this has been arrived at, it will be realised that the person will be doing in a day's time what he was doing in three days.

While preparing the time schedule it is very necessary to keep in mind certain things. Unexpected happenings should always be considered as normal affairs. Therefore, always make a provision for the unexpected.

Deadlines must be strictly adhered to. If you have not been able to finish your work within a stipulated period of time, you should leave it there and attend to the next work which is on schedule.

The time schedule should be flexible because many a time you have to accommodate forces beyond your control. If there is no cushion provision in your time schedule, it will always remain upset.

Time management has acquired significant dimensions because students today have to study 30-40 times more than what their fathers or grandfathers had to. Time, however, is the same. The successful ones are those who are able to manage their time efficiently.

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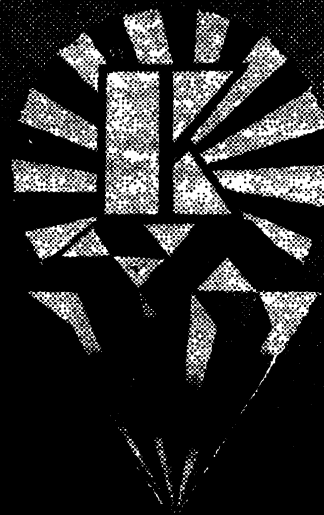
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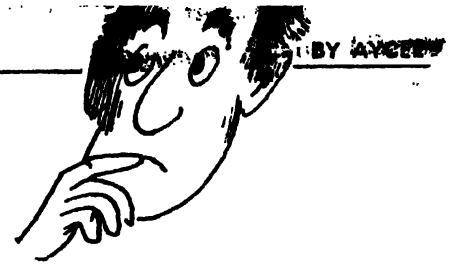


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TEST YOUR WORD POWER



Tick the word or phrase you believe is *nearest in meaning* to the key word:

1. **acrid**: A: mild B: violently bitter C: hateful D: poisonous
2. **aquatic**: A: like water B: living in water C: like an eagle D: connected with breathing unit
3. **asylum**: A: organisation with charitable purposes B: place for people with weak lungs C: protection from persecution D: place where people meet for a common purpose
4. **auspices**: A: patronage B: leadership C: magic spell D: free entertainment
5. **cinders**: A: heaps of rubbish B: mixture of pepper and fruit C: ashes D: thick slices of meat
6. **emblem**: A: symbol B: sign of good fortune C: flag D: motto
7. **fouler**: A: to stumble B: establish C: grope D: defeat
8. **gourmet**: A: person who is fond of good eating B: person with special knowledge of arts C: person expert in the choice of wine and food D: an efficient administration
9. **halcyon**: A: melodious B: honey-like C: troubled D: prosperous
10. **hoech**: A: nonsense B: good luck charm C: alcoholic liquor D: pipe
11. **lethal**: A: without breaks B: deadly C: lacking in energy D: like a lion
12. **mythic**: A: person who doubts the truth of a religion B: one who seeks direct communication with God C: one who has refined taste D: one who records myths in writing
13. **penal**: A: connected with law B: concerning hardship and suffering C: connected with punishment D: concerning rights and duties
14. **propagate**: A: to spread from person to person B: give higher position C: affirm strongly D: draw attention to
15. **pupil**: A: a person with good qualities B: person being taught C: person given authority over his fellows D: highly learned person
16. **retinue**: A: group of army officers engaged in planning B: group of persons attending a person of rank C: group of persons working under a head D: member of a state serving the supreme ruler
17. **rigours**: A: harsh punishment B: causes of suffering C: plans for conspiracy D: severe conditions
18. **trickle**: A: a sudden gush B: itching sensation C: an artificially produced jet of water D: thin flow
19. **yarn**: A: a unit of currency B: story C: gap D: urgent longing
20. **yield**: A: to produce B: excite C: twist D: try to win

(Answers on page 62)

IDIOMS & PHRASES

1. **To drive a quill**: to write. He earns a living by driving a quill.
2. **To qualify for**: to be fit for. To qualify for the job of a professor in a Delhi college, one must hold a Ph.D. degree.
3. **In quest of**: in search of. They went to the Himalayas in quest of peace.
4. **To be a Quixote**: to be idealistic to an impracticable degree. Modern man cannot afford to be a Don Quixote.
5. **Quirk of fate**: twist of destiny. By a quirk of fate, a prisoner of yester-years became the King of France.
6. **For a rainy day**: for hard times. It is always wise to save a dime for a rainy day.
7. **Ravages of time**: destruction caused by years. Both men and mansions suffer from the ravages of time.
8. **To reckon with**: to take into account. Every government has to reckon with major problems caused by natural calamities and make suitable budgetary provisions.
9. **To restrain from**: to hold in check. Children should be restrained from playing truant.
10. **To renege from**: to retract from an earlier stand. A government cannot renege from its commitments to its people.
11. **To ram down**: to crush. The autocratic monarch rammed down the Opposition in every conceivable way.
12. **To rant against**: to criticise. All over the world, people are heard ranting against inflation.
13. **With respect to**: having regard to. He was let off lightly with respect to his physical infirmity.

14. **Without rhyme or reason**: without any valid cause. Many innocent people were murdered during the revolution in Iran in 1979 without any rhyme or reason.
15. **To ring in**: to welcome, usher in. Let us ring in the New Year.
16. **A riot of colours**: colourful. The garden was a riot of colours last spring.
17. **Ripe old age**: old with age. George Bernard Shaw died at the ripe old age of 95.
18. **To rock the ship**: to create trouble. If you want to live peacefully yourself, don't rock the ship for others.
19. **Under the rose**: in secret. Many deals are conducted under the rose.
20. **In the red**: in danger. India's unity is in the red and hopefully the new government will have a hold over the situation.

QUOTABLE QUOTES

Men have an extraordinarily erroneous opinion of their position in nature; and the error is ineradicable.

Somerset Maugham

The greatest thing in the world is to know how to be self-sufficient.

Michel de Montaigne

Is not life a hundred times too short for us to bore ourselves?

Friedrich Nietzsche

The most successful politician is he who says what everybody is thinking most often and in the loudest voice.

Theodore Roosevelt

What is Conservation? Is it not adherence to the old and tried, against the new and untried?

Abraham Lincoln

Here we all live in a state of ambitious poverty.

Juvenal, Satires

Nothing lays itself open to the charge of exaggeration more than the language of naked truth.

Joseph Conrad

The nearest way to glory is to strive to be what you wish to be thought to be.

Socrates

Government, even in its best state, is but a necessary evil; in its worst state, an intolerable one.

Thomas Paine, Common Sense

That man is great, and he alone. Who serves a greatness not his own.

For neither praise nor self:

Content to know and be unknown:

Whole in himself.

Owen Meredith, A Great Man

Why is it that we rejoice at a birth

and grieve at a funeral? Is it because we are not the person concerned?

Mark Twain,

Pudd'nhead Wilson's Calendar
If you get simple beauty and naught else,

You get about the best thing God invents.

R. Browning, Fra Lippo Lippi

Remember that the most beautiful things in the world are the most useless; peacock and lilies, for example.

John Ruskin,

The Stones Of Venice
A little learning is a dangerous thing; Drink deep, or taste not the Pierian spring.

Alexander Pope,

Essay on Criticism

Very often he that his money lends, loses both his gold and his friends.

C.H. Spurgeon, John Ploughman
We would rather die on our feet than live on our knees.

Franklin D. Roosevelt,

Address, 1939

Literature always anticipates life. It does not copy it, but moulds it to its purpose.

Oscar Wilde,

The Decay Of Lying

Man is a rope connecting animal and superman—a rope over a precipice. What is great in man is that he is a bridge and not a goal.

Neitzsche,

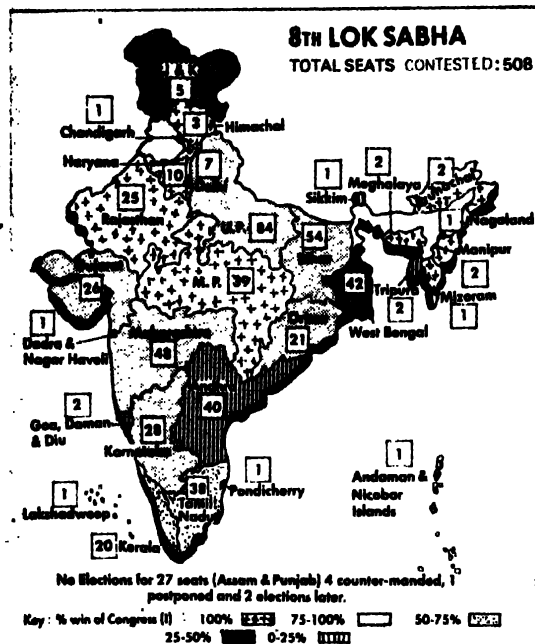
Thus Spake Zarathustra

Hitch your wagon to the star.

Emerson, Civilisation

ELECTIONS '84 THE HAND'S UP

BY JYOTSNA SHARMA



For the Congress(I) hand, its been a hands down victory. The eighth general elections established, rather comprehensively, the virtual invincibility of the ruling party. In its greatest election win ever, it polled a record 49.17% of the popular vote. The results of the elections negated the predictions of many political pundits stunning even the most staunch and optimistic in the Congress(I) camp. Capturing 401 of the 508 seats, the party surpassed its previous record of 371 seats in the Nehru regime, emerging a victor unparalleled. The verdict of the masses is devoid of ambiguity and uncertainty. For details see *Current Events*.

There was a very definite swing in favour of the Congress(I) this time. An electorate of 378m was faced with a choice of over 5,000 candidates on Dec 24, 27 and 28. And in its wisdom, after much soul-searching and brain-ticking, decided to paint the country saffron, white and green, the colours of the Congress(I) flag, thus identifying it with the national flag. What will never cease to amaze onlookers is the absolute and harmonious blending of minds all over the country which takes place during an event of crucial importance to all of them. A poor Tamil voter never meets his affluent coun-

terpart residing in a plush bungalow in Delhi nor does a wealthy Marwari businessman meet the poverty stricken farmer tilling land in Bihar. And yet they think alike, feel alike and vote alike.

The Congress(I) win this time was a vote of confidence expressed in favour of the Congress platform as a whole and Rajiv Gandhi as an individual. Several reasons can be attributed in favour of both these. The elections this time were unique in that they were held at a stage when India was shrouded in an atmosphere of terror, evoked by Mrs Gandhi's assassination and its aftermath, and uncertainty. Insecurity prevailed and with mammoth national calamities occurring with dangerous frequency over the whole of 84, as well as threats from without, there was an undercurrent of panic. People wanted a government which represented safety from the twin external and internal dangers as well as holding promise of a stable hand at the reins. The Congress(I) was, perhaps, the only party which presented a strong, united front—a relief in the light of the petty quarrels and disunity in the Opposition ranks. Also the public had learnt well from the 1977 lesson administered to it in the Opposition regime when all it got from a coalition government was the ensuing tussle for power in the top echelons of leadership.

The ruling party in its manifesto promised a clean, efficient government which works. And this motto clicked with the masses. The stable front coupled with Rajiv's fresh, positive and effective handling of the office of prime minister in his two-month tenure lent credibility to the Congress(I)'s promises. That Rajiv meant

NEVER SAY LOST

Hotepasha Rangaswami has the dubious distinction of having contested 49 elections—ranging from the presidential and parliamentary to the municipal—and having successfully lost all of them. He now marches on to his half century with a never-say-lost attitude, patience and perseverance despite having to forfeit the security deposit each time. One can only hope he has better luck sometime.

J.S.

WINNERS AND LOSERS

- Rajiv Gandhi polled 83.6% of the votes polled in Amethi—the highest by any prime minister. Of the 110 MPs of the dissolved House to be unseated, 23 belonged to the Congress (I) of whom 19 lost in Andhra Pradesh alone. Only 10% candidates of six opposition parties could win elections.

- The BJP was wiped out completely from 15 states and three union territories.

- All the three film stars defeated three stalwarts of the Opposition (Amitabh Bachchan defeating H.N. Bahuguna, Sunil Dutt defeat in Ram Jethmalani and Vyjanthimala Bali defeating Era Segyan.) Sixteen of the 22 scions of former royal families have been elected. All 16 belonged to the Congress (I). The losers belonged to the Opposition, including Dr Karan Singh.

- The Congress (I) bagged 80% of the reserved seats winning 90 out of 112.

- Veteran Parliamentarian Tridip Choudhry (RSP) failed to return to the eighth Lok Sabha for the first time since 1952.

- There are 41 women MPs in the Lok Sabha—the highest since Independence. Their number was 28 in the dissolved House. In 1952 their number amounted to 22. For the first time in 17 years Himachal Pradesh is being represented by a woman in the Lok Sabha.

- The ministers of the seventh Lok Sabha who lost in this election are P.V. Narasimha Rao (from Hanamkonda), Harinath Mishra (Dharbhanga), Venkat Subhaiya (Nandga), Sanjeev Rai (Kakinada), S.M. Krishna (Mandya), Malikarjun (Mahbubnagar). S.P

business when he stated that corruption, disloyalty and inefficiency would not be tolerated at any level was demonstrated by his dismissal of A.R. Antulay, P.C. Sethi, former Home Minister and Ram Chander Rath. The top priority he accorded to Punjab and Assam went in his favour too, for it was a positive step towards removal of destabilising forces from the country.

Rajiv endeared himself to the masses in

LOOKING BACK

The eighth general elections have proved to be historic for more reasons than one. Never has any party been voted to such a massive mandate as this. Never have the north and the south shown such conformity in their voting patterns. And, never has any regional party emerged as the main Opposition. This, coupled with the role of women, the role of film stars and the wiping out of the most prominent opposition leaders have made the present elections particularly outstanding.

Over the years the Indian polity has evolved gradually and considerably. In the first general elections, the Indian National Congress emerged as the dominant party securing 369 seats. The other parties which managed to make their presence felt were the Socialist Party (12 seats), the Communist Party of India (16), the Kisan Mazdoor Praja Party (8) and the Jana Sangh (3). The one-party dominant system continued throughout the next two elections, of course with the Communists doubling their strength (routing the Congress in Kerala and forming a government). A new feature of the third general elections was the emergence of the Swatantra Party, formed in 1959 as a result of opposition of the Congress to the Nagpur Resolution on cooperative farming. In the 1962 elections, it won 22 seats.

The personality factor being removed following Nehru's death, in the fourth general elections the Congress returned with a much lesser majority. Of the 516 seats, it won 279 (54.1%) and 40% of the popular vote. It was for the first time that in the same Assembly elections the Congress was made to sit in Opposition, in most of the states. At the national level Swatantra and Jana Sangh improved their positions. Regional forces also developed, e.g., the Akali Dal, the DMK and various split Congress parties.

In the years following the fourth

general elections, the ruling party recognised the need to forge the varied sections of the ruling class together and restore the consensus pattern if it had to continue in power. Thus came the radical steps of nationalisation of banks in 1969, abolition of princely privileges and ban on company donations to political parties. The Congress itself underwent a transformation. The conservatives had broken away, forming Congress (O), and Congress itself was organised around the personality of Mrs Gandhi.

The next general elections were announced in 1971—the first mid-term polls, delinking the national and the Assembly elections. Under the slogan of *Garibi Hatao*, the Congress once again emerged as the middle-of-the-road party based on a continuing consensus pattern enclosing within itself most sections of the ruling class. The party secured a two-thirds majority winning 352 seats, and reducing the influence of the Jana Sangh in the north. Regional parties were cut to size while the position of Communists remained unchanged. In the 1972 Assembly elections the Congress emerged as the dominant party.

The Congress would have benefited from the fruits of the 1971 Indo-Pak war, the Indo-Soviet treaty, and the Pokharan explosion of 1974, and but for the emergency imposed by Mrs Gandhi in June 1975 and the subsequent dictatorial attitude displayed by banning opposition parties and controlling the mass media. This turned public opinion totally against the Congress. More important, it brought the major opposition parties to a common platform under the banner of the Janata Party. The 1977 elections turned *volte face* in the north, from where major leaders including the then PM Mrs Gandhi contested. In the south, in Kerala and Tamil Nadu, and in West Bengal, the Congress had not scored more than one-eighths even in the previous elections. The situation remained unchanged in 1977. The Congress, however,

managed to secure 154 seats in a House of 542.

The Janata Party could not maintain its unity for more than three years. Personal ambitions, internal bickerings, and factionalism marked its working right from the beginning. As a consequence, in July 1979 Morarji Desai resigned from the post of prime minister and an interim government under the leadership of Charan Singh was formed. General elections were announced once again in 1980. The Janata Party had split into Janata (comprising mainly the Jana Sangh) and the Lok Dal (comprising elements of the Bharatiya Lok Dal).

The elections evoked a negative vote. Following their discontent with the Janata, the masses voted in the Congress (I) (the Congress had by now split into Congress (S) and Congress (I)). It bagged 353 of the total 527 seats, i.e., 66% of the House taking 42.68% of the votes. The Janata secured 31 out of 431 seats it had contested with 18.93% votes. CPI(M) had won 36 out of 63 seats it had contested and CPI won 11.

The 1980 elections improved the position of the Congress (I) in the north particularly in Himachal Pradesh, Madhya Pradesh, Rajasthan and Delhi. In Haryana the Congress (I) secured only 50% of the seats. On the national level the Opposition now comprised the BJP headed by Atal Behari Vajpayee and the Janata Party headed by Chandrashekhar.

Just before the assassination of Mrs Gandhi, it was widely predicted that the state of Indian polity would largely be coalition-oriented in the forthcoming elections, due before Jan 19, 1985. Her sudden demise, however, turned all predictions haywire. The vacuum created an unknown fear in the minds of people. The Congress (I) was consolidated once again, under the leadership of the heir apparent—Rajiv Gandhi—and emerged victorious securing 401 of the 508 seats.

SAVITA PANDEY

general and youth in particular by coming into Indian politics as a breath of fresh air. In an atmosphere stagnant with stubborn old croonies representing the same old never-to-be-fulfilled promises came a dynamic young man full of enterprises and innovative ideas showing a glimpse of what India could achieve once out of the rut. A young post-independence democracy, with as many as 75% of Indians belonging to the below 35 years category, identified itself with a young leader who raised visions of hope within

it. Unsullied by arrogance or corruption Mr Clean appeared attractive to the young and old alike.

A major determining factor was the female electorate. Comprising half the total electorate and fast making its own decisions, this discerning population was also responsible for the phenomenal Congress(I) sweep. Previously identifying themselves with Mrs Gandhi, the women were rendered virtually destitute after her demise. And consequently their votes went in favour of her son in whom they

saw a continuation of her traditions.

It would be unfair to overlook the symphonic wave generated by the brutal assassination of the late prime minister for that it contributed significantly. That she died in so unjust a manner, that she was an unarmed, unprepared, defenceless lady attacked by armed young assassins made her appear a martyr for a cause in the eyes of the people. Indira dead became more powerful than Indira alive for never in her lifetime did she suc-

(Continued on page 57)

Religion And Politics

Historically, religion and politics have remained divorced in India. Although the rulers did abide by religious edicts, generally political decisions were bereft of any religious overtones. However, this position substantially changed during the British rule. The British, in an attempt to perpetuate their rule, sought to divide the people and in the multiplicity of religions they found a handy tool. In the early part of the 20th century when the freedom movement started gaining momentum, efforts began to create a rift amongst the Hindus and the Muslims—the two dominant religious communities of the sub-continent—by providing for separate electorates for each. It was due to the active encouragement of the colonialists that the "two-nation theory", based on religion, led to the partition of British India into independent India with a Hindu majority, and Pakistan with a Muslim majority. Thus, partition saw religion making inroads into politics. After independence, however, the towering presence of Jawaharlal Nehru enabled India to pursue a secular path and he succeeded in maintaining a healthy distance between religion and politics. Certain religious groups like Master Tara Singh's Akali Dal did try to disturb the balance, nevertheless, such cases were stray and localised with no national repercussions. The situation had undergone a complete metamorphosis by the time Mrs Gandhi came back for a second innings in 1980. Assam found itself in a conflagration of religious opposition which left nearly 3,000 Hindus and Muslims dead. As if this was not enough, the Anandpur Sahib Resolution snowballed into devastating religious fanaticism which not only left Punjab burning but culminated in the assassination of Mrs Gandhi.

The emergence of Bhindranwale and his exploits thereafter brought forth a grim realisation of the disastrous consequences of mixing religion with politics. Instead of furthering Sikh interests, the infusion of religion into Punjab politics destroyed the economy of the state, the traditional amity between Hindus and Sikhs and wrought havoc on Sikhs outside Punjab. Had religion been given a back seat, a political solution could have been found to the Punjab crisis, thousands would not have lost their lives nor would a prime minister have been murdered. This goes to prove that attempts to settle political scores through

religion always fail.

Religion and politics have different objects. While one aims at spiritual and moral salvation of man, the other seeks to lead the people to physical and material well-being. Any attempt to fuse the two spells dangerous portents for society. Europe could enter modernity and progress only when it broke away from the shackles of the church. The US has been able to prosper primarily because the state is free from religious pressures. On the other hand, the Muslim countries, despite their wealth, limp towards development as they are still struggling to divorce religion from their everyday life. Iran, for example, had an enviable track record for a developing nation. But after the overthrow of the Shah, both the society and economy have slumped because of the orthodoxy of the mullahs.

If India has to progress and attain the glorious destiny that awaits it, it will have to be wary of religious pulls and pressures. The country will have to maintain a secular character. Representation of nearly all religions of the world in India makes it susceptible to fissiparous elements but it has survived 2500 years and will carry on for another 2500 years to come.

Terrorism—The Greatest Threat To Democracy

A democratic society thrives on freedom—freedom of speech and expression, of trade and profession, of religion, in general a freedom to every citizen to follow a path of his choice. The consolidation of these choices provides the foundation of a democracy and gives that society a particular direction. However, this may not suit the inclinations and preferences of a few. This minority, failing to achieve its ends through democratic means gropes for other ways to establish itself. Terrorism is one such means.

Terrorism is the despicable resort of cowards. It has been defined as "the use of terror, violence and intimidation to achieve an end". Democracy being based on convergence of diverse interests, is, as Sir Winston Churchill remarked, "the fragilest of all systems". It is, therefore, more susceptible to the machinations of the terrorists. Taking advantage of the freedom offered by an open society, efforts are made to destroy the system and throw the state into turmoil. For, when terrorism succeeds, the political situation becomes fluid and serves the purpose of the terrorists. To

take a recent example, terrorism on a large-scale was witnessed in Punjab. Hundreds of innocent citizens lost their lives in an attempt by extremists to make the people lose their faith in the government and consequently, force the government to concede impossible demands. Having been stamped out by the government they struck by assassinating Prime Minister Indira Gandhi. Their prime objective was to create chaos and destroy the integrity of the country.

While terrorism is a recent development in India, in Europe it has been raising its ugly head for quite sometime. The Irish Revolutionary Army (IRA) in England, the Red Brigade in Italy and the Basque Nationalists in Spain, to name a few, are some examples of the venom that has stung democracies round the globe.

However, though terrorism is the greatest threat to democracy, a democratic society by its general abhorrence of terrorism is able to unite its people against such terrorist acts. If the IRA, Red Brigade and others are still struggling for survival and haven't succeeded in their objectives, despite being on the scene for such a long time, it reflects the rejection of their likes by right-minded people. Indians too paid a rich tribute to democracy and earned universal respect for preserving their unity and integrity despite the provocation offered by Mrs Gandhi's assassination and the bloody aftermath. India, the world's largest democracy, whom few countries can match in diversity, has proved that though terrorism still stalks free societies, it is not a menace which cannot be conquered. Freedom does allow these elements to flourish, but then universal opinion both within and without the country immediately affected, against terrorism, unites people in this struggle. Democratic societies cannot leave their free paths and the terrorists will not give up their destructive ways. They pose a threat to not one country but to the survival of mankind as a whole. Therefore, cooperation between all nations to curb terrorism is necessary. The successful release of hijacked Indian passengers and aircraft from Dubai, alongwith their hijackers after negotiations between officials of India, the US and Abu Dhabi shows that international cooperation can make many a plan of terrorists go awry.

Terrorism is the greatest threat to democracy, but it has a bulwark—unity and cooperation. ■

FOR & AGAINST

Are regional parties a threat to the unity of India?

The growth of regional parties is a new trend in Indian politics. More significant is the fact that these parties have surfaced almost simultaneously. Tamil Nadu has for long been under the strong influence of the DMK and the AIADMK. In Andhra Pradesh, the Telugu Desam has come to stay. NTR has continuously been widening his sphere of influence in this one-time Congress bastion. Assam has been in the midst of a regional movement, in which there is very little for the national parties. The Kranti-Ranga Party in Karnataka (now merged with Congress (I)) was also founded with narrow regional (personal?) ends in mind. The National Conference of Sheikh Abdullah is also in a shambles after his demise. It is strongly felt by some that the emergence of regional parties and regionalism is a grave threat to the unity of the country. This group believes that in a multiparty system, a single party should dominate. There is another school of opinion which believes that regional parties will help in the removal of regional disparities, which have escalated in India in these three decades. This, they contend, will strengthen the forces of integration in the country.

For

■ At the core of regionalism is a profound sense of identity which is very dear to the people living in the region. This feeling often overrides the sense of identity to the nation. Regional parties endeavour to capitalise on this and consolidate their base for personal ends. Therefore regional forces definitely undermine the unity of the country.

■ Regionalism leads to the emergence of a sense of confrontation between the Centre and the states, on most matters, including the division of the national 'cake'. Hence a conflict between national interests and regional interests gets promoted. Such differences endanger the strength of the nation.

■ India has a federal structure where a single political party has had a long reign. With the decline of this strong party, the state leaders have opted for establishing regional parties. Thus, the aspirations of a single individual to make a mark in politics, lies at the roots of the formation of a regional party. An important ingredient is, of course, a charismatic individual with a burning ambition and a large fan following. Since these parties can never rise above narrow grounds, they constitute a threat to the integrity of the country.

■ The regional parties find it expedient to pander to petty and divisive parochial sentiments for personal gains. Such elements strengthen the fissiparous tendencies which hit at the unity of the country. Moreover such parties can easily fall prey to 'foreign hands' and hasten the disintegration of the country.

■ All issues depend on the whims and fancies of the leader. Those measures which ensure votes rather than public welfare, are taken up. Hence the development of the country is jeopardised.

■ The regional parties make no attempts to create among their followers a burning national consciousness transcending loyalty to local, regional and linguistic issues. This weakens the common thread which ought to guide the life of every Indian.

■ The growing influence of regional forces adds to the all-pervasive corrupt atmosphere. Since hero worship is encouraged, sycophancy becomes an accepted norm. Nepotism and dispensation of favours to a chosen few, vitiates all aspects of life. Such tendencies are dangerous for the unity of the country.

Against

■ Regionalism embodies a quest for self-fulfilment on the part of the people of a particular area. In a federal set-up it is vital for people to have some scope for positive expression of their 'collective personality'. This adds to the well-being of the inhabitants of an area and strengthens cohesion in the society.

■ Maldevelopment and the fear of being left out prompts individuals in a region to take shelter under the umbrella of the regional forces. The development process in our country has been such that some regions have been bypassed while others have gone much ahead. Thus the economic component is the crux of the problem. The regional parties fight for these economic rights and try to establish a distinct identity for the state concerned. Therefore regional disparities get minimised and the country's prosperity is augmented.

■ In India the relationship between the Centre and the states is characterised by the 'big brotherly' attitude of the Centre. The desire is to dominate and dictate terms to the states and this leads to the emergence of ethnic and cultural differences in the states. Hence regional parties come up, shielding the region from further exploitation by the Centre. Regional parties therefore do not effect the unity of the nation but act in the interests of the states or regions.

■ The formation of regional parties and their growing influence is a reflection of the widening participative base in politics. The increasing consciousness of people towards politics makes these regional parties a forum for expression of the popular will. This reveals a tendency towards a strong democracy in the country.

■ The rhetoric that regionalism is anti-system and anti-integration is nothing but negative thinking. It only indicates the ambitions and evil designs of the ruling party, whose inner structure is crumbling. To perpetuate its authority and to gain more powers the ruling party dubs regionalism as a threat to the unity of the nation.

■ The aim of Indian nationalism is to develop in the country a cultural, linguistic and political identity based on language. Articulation of demands for their respective regions, by the regional parties, cannot be treated as destabilising forces.

■ Even historically speaking language and cultural identity was supposed to strengthen the federal structure of the country. This was the basis of reorganisation of the Indian states on a linguistic basis. Jawaharlal Nehru had also suggested strengthening of regional identities to bring the states together.

J.V.A.K.

GK.GK.GK.GK.GK.GK.GK.GK.GK.GK.

BY SHIV KUMAR

Postal services were introduced in India in 1837. The first postage stamp was issued in 1852. The Postal Department was set up in 1854; at that time about 700 post offices were functioning in the country. The Railway Mail Service was introduced in 1907 and the Air Mail Service in 1911. The number of post offices as on Dec 31, 1983 was 1,44,147—15,268 in urban areas and 1,28,879 in rural areas. On an average each post office serves 4.81 persons and covers an area of 22.80 sq km. In addition, 70,209 villages were being served through mobile counter service facilities. More than 99% of the villages were provided daily mail delivery by Mar 31, 1983.

The country has postal communication facilities with 166 countries of the world. India has been issuing special commemorative postage stamps since 1931. The total number of philatelic bureaux is 40 and that of philatelic counters 136. Telex services are available in 172 cities. Telephone services have made tremendous progress. India had a 50-line manual telephone exchange in 1881-82 in Calcutta; today there are about 29.33 lakh lines located in 9,288 exchanges.

INSAT-1B, launched in August 1983, connects 28 earth stations which in turn provide telecommunication facilities to far-flung hilly and inaccessible areas. The Indian Telephone Industries produces a wide range of telecommunication equipment. It has five production units at Bangalore, Naini, Palghat, Rae Bareilly and Srinagar.

Rural development aims at strengthening the socio-economic infrastructure as well as alleviation of poverty in rural areas covering 75% of the country's population. This objective continues to be reflected in the package of programmes launched during the successive five-year plans.

With the objective of raising the poorest families above the poverty line by giving them income-generating assets and access to credit and other inputs, a new programme known as the **Integrated Rural Development Programme (IRDP)** has been extended to all the development blocks in the country. With Rs 1,500 crores allocated for the programme under the Sixth Plan, it aims at providing assistance to 150 lakh families with the outlay of Rs 35 lakhs per block. One of its schemes, the development of women and children, has been launched in 51 selected districts from 1982.

Efforts are on to solve the problems of drought-prone areas under the **Drought-prone Areas Programme**. The outlay for the programme in the Sixth Plan is Rs 350 crores. It covers 511 blocks in 70 districts of 13 states. So far Rs 565 crores have been spent on the programme since its inception.

The **Desert Development Programme** is related to the severity and expanse of desert conditions. The programme at present covers 11 districts in Rajasthan, four in Haryana and two each in Gujarat, J & K and Himachal Pradesh. The allocation for the programme during the Sixth Plan is Rs 100 crores.

The **National Rural Employment Programme (NREP)** earlier known as 'Food for Work Programme' aims at providing supplementary employment opportunities to the seasonal unemployed rural workers. From April 1981 the programme is being treated as a regular part of the Sixth Plan. A total provision of Rs 1,620 crores has been earmarked for the programme during the Sixth Plan. A beneficial feature of NREP is the distribution of 1 kg of foodgrains at subsidised rates to workers, as part of wages, in order to improve their nutritional standards.

The basic objective of the **Rural Landless Employment Guarantee Programme (RLEGP)** is to provide employment to one member of each landless labour household on a yearly basis, for a period of 100 days. The Sixth Plan allocation for the programme is about Rs 600 crores. The National Scheme of Training of Rural Youth is meant to equip rural youth with necessary skills and technical assistance for self-employment. Two autonomous organisations—National Institute of Rural Development (NIRD) and the Council for Advancement of Rural Technology (CART)—are engaged in rural development work.

The **National Bank for Agriculture and Rural Development (NABARD)** and the **Regional Rural Banks (RRBs)** are functioning in the field of institutional finance. The Sixth Plan envisages setting up of 170 RRBs covering 270 districts.

To meet storage requirements, a programme for establishing a

National Grid of Rural Godowns exists since 1979-80. During 1983-84 construction of 2,956 godowns with a storage capacity of 14,42,686 metric tonnes was approved.

As a major step towards **land reforms**, over 2 crore cultivators have been brought directly under their respective states by abolishing intermediary tenures. Tenancy reforms with legislative measures have also been introduced. Under land ceiling laws nearly 60 lakh acres have been taken over by the states. Of these 42 lakh acres have been distributed. An area of 5.10 crore hectares has been consolidated till October 1983. There are at present 2,17,319 village panchayats, 4,526 panchayat samitis and 297 zila parishads implementing the rural development programme. Nagaland and Meghalaya, among the states, and Mizoram and Arunachal Pradesh among the Union territories, do not follow the Panchayati Raj system.

Steady progress has been made in the **electrification of rural areas**. By the end of March 1984, over 3.46 lakh villages out of a total of 5.76 villages were electrified. Three states—Haryana, Kerala and Punjab—have electrified all their villages and Tamil Nadu has electrified 99.6% of its villages.

At 40, **Rajiv Gandhi** has joined a select fraternity of pilots-turned-rulers consisting of Hosni Mubarak of Egypt, Jerry Rawlings of Ghana and Hafez Assad of Syria.

Work is in full swing on the **world's longest gas pipeline** from Urengoi to Uzhgorod in the USSR. The eventual length of the pipeline will be 4,451 km and it will produce 32,000 m cubic metres of gas per year. This unique gas pipeline will have 40 compressor stations and two gas cooling stations. Most of the steel pipes have been imported from West Germany, while the French firm Dresser France has supplied compressors for the pipeline.

Around the year 1810, an Englishman hit upon the idea of **compressing dry coal gas** and putting it into small, one-pound tanks. This was compressed 'tank' gas. Five decades later, Julius Pintsch, a German, who was trying to develop a safe portable fuel for railway carriages, created 'Pintsch gas' by cracking oil at high temperatures to form an oil gas. By 1866, Pintsch gas had been introduced into the US and within a short time there were some 100 Pintsch gas plants in the country. Pintsch had made compressed gas in bottles commercially feasible, and, inadvertently, he was the first to liquefy it. He was followed by J.J. Coleman who, in early 1870s became the first to intentionally, and successfully, liquefy petroleum gas. Later Herman Blau, a chemist in Germany, invented another process of liquefying petroleum gas, and his technique, developed in 1901, produced a product which came to be known as Blau gas. This was an evil smelling mixture of liquefied petroleum gases, 'permanent' gases and light fractions of gasoline, all synthetically produced.

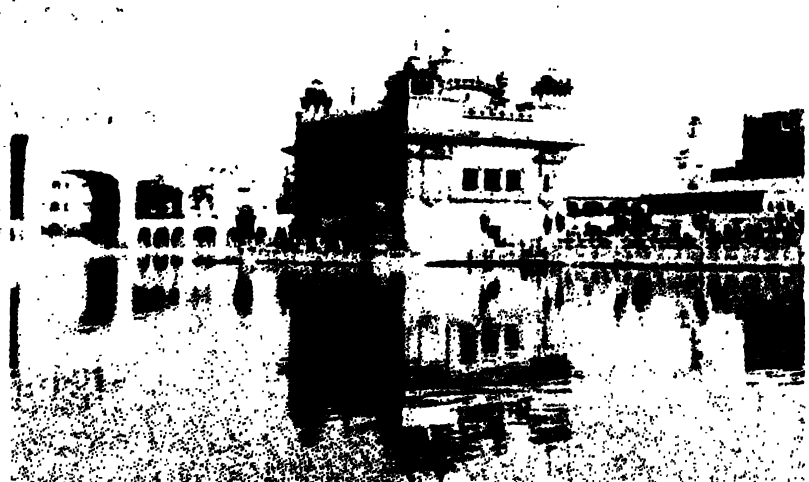
The **Suez Canal** was opened for navigation on Nov 17, 1869. The canal is open to vessels of all nations and is free from blockade except in times of war. It is 173 km long, connecting the Mediterranean with the Red Sea. Its minimum width is 197 ft and its depth permits the passage of vessels upto 38 ft draught. The first tunnel below the canal, located 10 miles north of Suez City, was completed on Apr 30, 1980.

The **BBC's domestic radio services** are available on LF, MF and VHF. The broadcasting authorities, whose governing bodies are appointed by Her Majesty, the Queen, as trustees for the public interest in broadcasting, are independent of government in matters of programme content and are publicly accountable to Parliament for the discharge of their duties. In 1981, the Broadcasting Complaints Commission was set up to consider and adjudicate upon complaints of unfair or unjust treatment in broadcast programmes or of unwarranted infringement of privacy in or in the making of programmes.

We invite readers to send us their queries on GK—provided the information being sought is not easily available. Of these a few will be selected for publication too. We regret that no direct correspondence will be possible. Do write to us at GK, C/o Career & Competition Times, 10 Daryaganj, New Delhi-110 002.



PUNJAB PURGE: After taking a drastic turn for the worse, the basically religious agitation in Punjab assumed its most horrifying proportions by May 1984. It was then that the Centre decided, in a last desperate bid to avert disaster, to call in the army. The catharsis began with the launching of Operation



Bluestar on Jun 6, 1984. Terrorists were flushed out of their hideouts and peace restored in the Golden Temple complex—converted to a virtual arsenal by the extremists. Both sides suffered grievous losses. But while the fire has been put out by and large, embers continue to flare up.

EIGHTH LOK SABHA ELECTIONS 'I' NG THE RESULTS

After being exposed to wooing of all kinds, by numerous political parties the Indian masses finally went to the polls on Dec 24, 27 and 28 to declare who had managed to win them over. Polling was brisk and heavy and about 60% of the 378m voters exercised their franchise. The elections for 16 states and 6 Union territories took place during the first phase of polling on Dec 24 while on Dec 27 and 28 voting for the remaining Lok Sabha constituencies was conducted.

Polling was marred by stray incidents of booth-rigging, booth-capturing and sporadic cases of violence. The magnitude of booth-rigging is evident from the fact that repolling had to be conducted in 62 polling stations in 15 parliamentary constituencies of UP, Bihar, West Bengal and Haryana on Dec 27. Coupled with this was the problem of the names of thousands of voters missing from the electoral list—a rather uncomplimentary commentary on the efficiency of the concerned authorities.

For the contenders it was an anxious nail-biting wait. The results started coming out Dec 28 onwards and the declaration was emphatic—it was a win unprecedented and overwhelming for the Congress(I) platform. And the Opposition was virtually blasted out of existence. Anyone contesting under the magical Congress(I) ticket invariably emerged triumphant and matters regarding competence, experience or seniority faded into insignificance besides this. Starring conspicuously in the action-packed win were the cine stars—Amitabh Bachchan, Sunil Dutt and Vyjanthimala Bali. What was most noteworthy about their wins was that they defeated the Opposition aces. Bachchan defeated H.N. Bahuguna, the politician with a track record of never having lost the poll race, while the BJP Vice-President Ram Jethmalani suffered ignominious defeat at Dutt's hands.

The outcome of the eighth Lok Sabha elections is as follows: In Haryana the Congress(I) swept through the state bagging all the 10 seats. In Rajasthan it did a repeat performance by winning all 25 seats. Madhya Pradesh was bowled over by the ruling party—it secured the 39 seats contested for (the elections in Bhopal were postponed to Jan 28 owing to the gas mishap). In Maharashtra the Congress(I) had a poll tally of 43 seats of the 48 while the remaining five were divided between the Congress(S)—2, Janata—1, Peasants and Workers Party—1 and Independents—1. In the Janata stronghold of Karnataka, this once popular party fared dismally when only four of its members were returned to power; the Congress(I) won the remaining 24 of a total of 28 seats. The CPM was ousted from Kerala where the Congress(I) won 13 of the 20 seats while the former secured only 1. The other six seats

THE NEW CABINET

Cabinet Ministers

Rajiv Gandhi—Prime Minister
Abdul Ghafoor—Works and Housing
Asoke Sen—Law and Justice
B. Shankaranand—Irrigation and Power
Bansi Lal—Railways
Buta Singh—Agriculture and Rural Development
H.K.L. Bhagat—Parliamentary Affairs
K.C. Pant—Education
Mohsina Kidwai—Health and Family Welfare
P.V. Narasimha Rao—Defence and temporary charge of Planning
Rao Birendra Singh—Food and Civil Supplies
S.B. Chavan—Home
Vasant Sathe—Steel, Mines and Coal
Veerendra Patil—Chemicals and Fertilisers
V.P. Singh—Finance

Ministers of State (Independent charge)

Maragatham Chandrasekhar—Women and Social Welfare
Nawal Kishore Sharma—Petroleum
Ram Niwas Mirdha—Communication
T. Anjaiah—Labour
V.N. Gadgil—Information and Broadcasting
Z.R. Ansari—Shipping and Transport

Ministers of State

Arif Mohd Khan—Industry and Company Affairs
Arun Nehru—Power
Ashok Gehlot—Tourism and Civil Aviation
Bir Sen—Environment and Forests
Chandulal Chandrakar—Rural Development
Ghulam Nabi Azad—Parliamentary Affairs
H.R. Bhargava—Law and Justice
Janardhana Poojary—Finance
Khurshid Alam Khan—External Affairs
K.P. Singh Deo—Personnel and Administration Reforms and Culture
K.R. Narayanan—Planning
Madhavrao Scindia—Railways
Margaret Alva—Parliamentary Affairs
Natwar Singh—Steel
P.A. Sangma—Commerce and Supply
R.K. Jaichandra Singh—Youth Affairs and Sports
Ram Dulari Sinha—Home
Shivraj Patil—Science and Technology, Ocean Development.
Yogendra Makwana—Health [Atomic Energy, Space and Electronics]



IN HIGH PLACES: On Apr 3, 1984, Sqn Ldr Rakesh Sharma created cosmic history when he became the first Indian to go on a space cruise. Selected by the Russians to be a member of their three-man crew aboard the Soviet spaceship Soyuz T-11 after undergoing rigorous training along with fellow Indian Wg Cdr Ravish Malhotra, he finally took off for his seven-day space trek. Launched from Baikonour Cosmodrome in Russia, the spaceship docked with the Salyut-7 spacecraft in space and returned to earth on Apr 11, 1984—touching down at Arkalyk. Back on earth now is a starry-eyed Sharma.

were shared by the Indian Union Muslim League—2, Congress(S)—1 Janata—1 and Kerala Congress(J)—2. However, the CPM managed to save face in West Bengal where it won 18 of the 42 seats with Congress(I) following close at heels with 16, CPI and RSP obtained 3 each and Forward Bloc 2. In Tamil Nadu 38 of the 39 seats were contested of which Congress(I) won 25, AIADMK 12 and DMK 1.

Andhra Pradesh was perhaps the main exception to the Congress(I) rule. N.T. Rama Rao established his rajya all over again when his Telegu Desam walked off with 28 of the 40 seats contested for (there are 42 seats altogether); the Congress(I) could manage only 6 while the BJP, Janata, Congress(S), CPM, CPI and Independents bagged one each. In the Hindi belt comprising UP and Bihar, the Congress(I) shattered the hopes of the Opposition (the Charan Singh-led DMKP and Vajpayee's BJP primarily) by pocketing 82 of the 84 contested seats in the 85-seat state of UP leaving DMKP with 2 only, and 48 of the 54 seats in Bihar with the rest going to CPI (2), and DMKP, Janata, Congress(J) and Independents one each. In the northern states of J & K and Himachal, the ruling party put up a fitting fight too, winning the three seats of the four contested for in the latter, even though it lost to the National Conference (Farooq) in J & K. Of the five out of six-seats contested for, the National Conference won three and Congress(I) two. The Congress(I) also had a clean sweep in the eastern belt where in Meghalaya, Arunachal, Nagaland, Manipur and Mizoram it won the 2, 2, 1, 2 and 1 seats contested for respectively, and at the same time winning 20 of the 21 seats in Orissa as well. The remaining one went to the Janata. It was not so fortunate in Sikkim and Tripura where it lost the lone contested seat to the SGSP in Sikkim and the two seats contested for in Tripura to CPM. It was Congress(I) all the way in the Union territories too—the only exception being Dadra & Nagar Haveli where the one contested seat went in favour of the Independents. As for the rest, the Congress(I) achieved a grand slam of all 7 seats in Delhi, while it hauled the sole contested seats from Pondicherry, Lakshadweep, Chandigarh, Andaman and Nicobar Islands and the 2 seats from Goa as well. The total booty the Congress(I) amassed was a staggering 401 (400 now with the demise of one Congress(I) MP) out of a total of 508 seats—by far the greatest win for any political party.

The developments in Bhopal in the past month have thrown light on several new facets of the gas tragedy which shocked people the world over. The population of Bhopal is still reeling in its venomous aftermath.

The arrest of the Union Carbide top brass including Warren Anderson, Chairman of Union Carbide in the US as well as Keshub Mahindra, Chairman of the corporation in India and V.P. Gokhale, Managing Director, while sending shock waves rippling over the corporate sector worldwide did evoke applause at least from the affected multitudes, for the firm hand with which the government dealt with the situation. Anderson was, however, bailed out for Rs 25,000 the same day. He revealed at a press conference in Connecticut that an expert team which had visited the Bhopal plant in June 1982 had reported that the plant was extremely unsafe, potentially hazardous because of lack of implementation of adequate safety measures. Despite being warned about this, both by the experts' report as well as by the accidents which had occurred over the past few years, the Union Carbide management preferred to turn a deaf ear to these and let things continue as they were. This attitude is clearly indicative of the callous, production and profit-oriented approach adopted by multinational concerns—particularly in the less developed poverty stricken Third World. And this, justifiably deserves the indignant outcry it has merited from various sections. And numerous lawsuits worth several billions of dollars have been piled up against Union Carbide. The company is, however, reluctant to adopt the same standards of compensation in India as it would have been forced to do under American or British law. This negligence and reluctance goes to show the low esteem in which human lives of the Third World countries are held by the magnates of the affluent world.

Meanwhile, in Bhopal, the government made concerted efforts to restore the faith of the stricken people both in the authorities as well as in the habitability of their home town. But death and disease had so shattered the hopes and confidence of the masses that the mere announcement of the launching of 'Operation Faith' had them fleeing the town in a frenzy of desperation. No amount of reassurance from the authorities could halt the exodus as people feared a new leak of poisonous gas. 'Operation Faith' consisted of the neutralisation of the remaining methyl iso cyanate (MIC). After analysing the situation scientists came to the conclusion that the most practical and safe way of neutralising was to convert it into a pesticide under fullest safety. Elaborate precautionary and safety measures were taken to prevent any further catastrophe in case of new gas leakage. These consisted of erection of scaffolding (of jute sacking) around the carbaryl plant and the MIC storage tanks. Three air force helicopters were deployed to spray water over the factory to trap any gas leakage. The scrubber and flare tower, the first line of defence which had failed to function on the fateful night of Dec 2-3, were restored to their working capacity. Standby arrangements for first-aid of possible victims were also made.

'Operation Faith' was set in motion on Dec 16 and was completed within three to four days. People this time, not relying on the safety arrangements of the authorities took precautions of their own. They left the town. And so the operation was conducted in a virtually deserted city. But its completion has succeeded in instilling faith in the inhabitants of Bhopal. They are braving it back to their homes once again albeit a little cautiously. For the images of death are still fresh in their memories. And now that they are back—campaigning for the Lok Sabha elections will begin. The elections were postponed to Jan 28 owing to the catastrophe.

MIZORAM TALKS HOPEFUL HEADWAY

A micable talks round the negotiating table are underway, on one side is Laldenga, the self-styled leader of the underground Mizo National Front (MNF). On the other is G. Parthasarathy, Chairman of the External Affairs Ministry's policy planning committee. Also in sight is an accord on the 23-year-old tussle between Mizoram and the Centre. And, therefore hopes are high.

Laldenga's arrival in India on Oct 23, 1984 to resume talks with the Indian Government, thanks to the initiative taken by Mrs Gandhi, set off hopeful speculations. These were shattered by Mrs Gandhi's assassination on Oct 31, the day Laldenga was to meet her. The new Prime Minister however took to hand the task left incomplete by his pre-



A WALK TO DESTINATION DEATH: It was a serene autumn morning on Oct 31, 1984. A smiling Mrs Gandhi walked through the garden path of No.1 Safdarjung Road, her official residence, to meet British actor-director, Peter Ustinov who waited with a TV crew. She was to give him an hour-long interview, little realising that fate was preparing her to give him, and the world, a chilling horror story of barbaric violence. As she folded her hands to greet the two Sikh security guards



standing along the path, and said, "Namaste," the two men, in whom she had laid complete trust, returned her greetings with a shower of bullets—Satwant Singh with his sten-gun and Beant Singh with his .38 revolver. Mrs Gandhi was dead. The loss was too grave for Indians who gave vent to their inner fury by indulging in sectarian violence of the worst kind—witnessed only during the days of partition.

decessor. And in December even as the whole country was preparing for the polls in earnest, talks for seeking a solution to the Mizoram insurgency problems were commenced once again.

The issues taken up during the talks between the Centre and Laldenga included the provision of a Kashmir-type status for Mizoram—the central issue which dominated the talks. For this an accord is being worked out along the lines of the 1981-82 negotiations which had sought to upgrade Mizoram to an autonomous state based on Article 371A of the Constitution. A measure of agreement on the question of special constitutional safeguards to protect the ethnic identity of the Mizos has also been reached.

Rehabilitation of underground Mizos and the dropping of cases against them has been agreed upon too. An understanding on the delimitation of Mizoram has been reached. Laldenga has included in his list of demands, among other things, removal of the Sixth Schedule as it is still applicable in certain areas of Mizoram. Framed under Article 224 and 275 of the Constitution, it provides the Governor with extraordinary powers. Thus even as the Assembly exists, it ensures virtual Central rule.

At the moment, Laldenga is in London, visiting family and friends in this festive season. Negotiations will be resumed upon his return this month. That the Congress(I) has established its unquestionable supremacy in the country may also prove beneficial. Till such time as they sit around the table once more, both Laldenga and the Centre are keeping their fingers crossed.

PUNJAB

SETTING PRIORITIES

The spotlight is on Punjab once again. In fact the Punjab issue was used by both the Congress (I) as well as the opposition parties for furthering their own ends by squarely placing the blame on each other's shoulders. The issue of religious segregation featured prominently in the election manifestoes and campaign speeches of all political parties.

Ever since Rajiv Gandhi assumed office as Prime Minister he was clear about his stance on Punjab. He unequivocally ruled out the acceptance of the Anandpur Sahib Resolution as he felt that its adoption would promote disintegration. It was not permitted by the Constitution either. He, however, gave assurance that due consideration would be given to the demands of Akalis on territorial and river water disputes. In his election campaign Rajiv lashed out at the Opposition for promoting divisive forces by siding the Akalis and their unacceptable demands. He also demanded a public denouncement of the extremists and terrorists by the Akalis.

The Congress(I) wave which has swept the country has not been greeted favourably by the Akalis. They have expressed their displeasure by inviting the defeated Opposition leaders Chandrashekhar (Jahata) and Ram Jethmalani (BJP) to contest the elections in Punjab as and when they are held. As for the Anandpur Sahib Resolution—the Akali Dal

absolutely refuses to consider a solution to the Punjab problem in its absence. Says Lalpura, acting President and senior Akali leader, "The Akalis have one and only one demand—the Anandpur Sahib Resolution and will continue to struggle till its acceptance".

Rajiv Gandhi, now the undisputed leader of the country, has once again reiterated the top priority his government plans to give to Punjab and one of his first post-election moves has been the constitution of a high-level ministerial panel comprising of P.V. Narasimha Rao, Defence Minister; S.B. Chavan, Home Minister; and K.C. Pant, Education Minister, to find ways to resolve the Punjab tangle. For this, he has decided to seek the cooperation of the Opposition as well.

It can only be hoped that the Akalis would give up their dogmatic attitude and assist the government in arriving at a peaceful solution to the Punjab issue.

That the government means business by stating that it will not allow disruptive forces to operate against the country, is evident from its treatment of Jasbir Singh Bhindranwale, nephew of Jarnail Singh Bhindranwale. The so-called organiser of the International Youth Federation, Jasbir Singh had left for Pakistan on the pretext of visiting religious places. Allegedly responsible for inciting anti-Indian sentiments abroad he was shuttled between Dubai, London and Manila where he was refused entry by the concerned authorities and finally cornered in India. At the moment he is being kept in a maximum security prison and cases under Sec 124A, 153A of the Indian Penal Code (sedition and promoting enmity between different groups on grounds of religion) and Sec 13 of Unlawful Activities (Prevention) Act 1967 have been registered against him. This should be an eye-opener for anyone with similar designs residing either in India or abroad.

MANIPUR

TERROR TACTICS

That politics is a deadly game was once again revealed when an attempt was made on the life of the Manipur CM Rishang Keishing on Dec 8, 1984. Although Keishing escaped unhurt, four of his security guards were killed and seven others injured. The car was attacked when he was heading towards his constituency, Phungyar, to address an election meeting.

The Nationalist Socialist Council of Nagaland (NSCN) assumed responsibility for the dastardly action. This underground organisation, currently operating in Manipur's Tangkhul inhabited areas has already killed more than 90 people in the last few years including the former CM Y. Shaiza. Recently, a district council member and a prospective Congress candidate were shot down.

In fact the NSCN had threatened the candidates contesting the general elections with 'dire consequences' and had specifically threatened to make an attempt on the CM's life before Dec 14, 1984. Keishing, who topped the terrorists' hit list, had taken precautionary measures by just campaigning during the day. He had also taken extra



POISON IN THE AIR: Bhopal witnessed the worst-ever industrial accident in world history when a killer gas silently suffocated over 2,500 people, till they were choked to death. People fled their homes, hospitals overflowed with tens of thousands unable to see or breathe and others who bled to death. Methyl iso cyanate (MIC), the harbinger of death, had vapourised into Bhopal's night air. The Union Carbide Pesticide Plant authorities had blundered. MIC, a lethal chemical, is used to manufacture pesticides and every possibility of human contact must be eliminated. However, on the tragic night of Dec 2 pressure built up in a 45-tonne capacity gas chamber causing the poisonous gas to leak out, beyond control, into the myriad human systems resting in silence. The Union Carbide's American owners rushed in for help without much effect. The exodus from Bhopal increased, and to ensure the future safety of the people, all the remaining gas from MIC tanks was neutralised by a process termed 'Operation Faith'. But what 'faith' and what 'future' when new-borns in Bhopal are likely to have damaged brains and thousands of children have been orphaned?

care about his personal safety before leaving for his election meeting. But the insurgents proved more crafty and succeeded in carrying out their threat even though they were unable to kill the CM in the attempt. Such acts can succeed only in terrorising people and the leaders further, without being of any use to the terrorists themselves. This has been made amply clear by the Congress(I) win in Manipur where the insurgents' terror tactics were rendered futile. For, violence can achieve nothing in the long run.

TO SIT IN JUDGMENT

India filed a complaint with the International Civil Aviation Organisation (ICAO) against Pakistan for allegedly arming the hijackers of the IA Boeing 737 on Aug 24, 1984 at the Lahore airport. This is a very wise move in the light of the tenuous relations existing between the two countries as the issue can now be resolved without an actual confrontation between them.

On Aug 24, the Boeing was hijacked when on a routine flight from Delhi to Srinagar it was to land at the Lahore airport. It was here that a pistol and ammunitions were supplied to the terrorists by Pakistan authorities. Information regarding the pistol was supplied by the passengers of the hijacked aircraft—in fact a foreigner saw a man in a *salwar* actually handing over a packet to one of the terrorists on the tarmac. This was confirmed by the crew and later revealed by the hijackers during investigations.

The complaint was accompanied by an Interpol confirmation that the pistol in possession of the hijackers was, alongwith 74 other arms, supplied to Pakistan by the West German manufacturers Walther GMBH. Arming of hijackers with an offensive weapon is an unlawful act "unprecedented on the part of any contracting ICAO state". It is also a grave violation of the Montreal, Hague and Chicago conventions and also of ICAO's objectives.

In sharp contrast to Pakistan's reprehensive action was UAE's firm stand on the issue when, after refuelling at Karachi, the plane landed at Dubai. They forced the hijackers to surrender and thereafter handed them over to the Indian authorities.

At a time when terrorism, particularly air piracy, is rampant, open support of such acts is uncalled for. The reprimand, however, rests with ICAO.

INDO-JAPANESE TRADE KNOTS IN THE TIE

Some headway was made for the betterment of Indo-Japanese economic ties when a 52-member Japanese delegation visited India in December last year. Talks were conducted with the Federation of Indian Chambers of Commerce and Industry (FICCI), which revealed the hurdles to the expanded trade between the two countries.

Japan is fearful that import liberalisation and greater accommodation of foreign investors may not continue for long. Also the delegation expressed the need for an appropriate 'investment climate' for the conduction of trade. For this it suggested improvement of infrastructural facilities such as power, transport and communications. It was also agreed by both sides that the existing imbalances should be corrected first and foremost. Then, efforts would have to be made to ensure quality, price and delivery schedules of Indian goods exported to Japan.

The Indo-Japanese Business Cooperation Committee (BBC), further identified numerous areas for industrial collaboration. These include mini and micro-hydel projects, instrumentation and control systems, indigenisation of oil exploration equipment, solar power units, electronics, auto ancillaries and telecommunications. In the agricultural field, hydroponic agriculture, irrigation and management of agriculture were singled out as areas in which cooperation could be possible. The BBC also suggested exchange of information and business delegations in these immediate areas of interest.

Japan has, on its part, identified several items for export to India. Among these are engineering goods, leather and leather products, textiles, readymade garments, household furnishings, gems and jewellery.

SUPREME COURT VERDICTS PROVIDING RELIEF

The highest judiciary in the land has been rather busy recently. The verdicts of the Supreme Court (SC) have sought to provide relief to various sections of the community in one way or the other.

The first case tackled by the SC concerns the freedom of the press. For the past three years the Union Government had been imposing a 15% duty on imported newsprint. This had consequently compelled the newspaper offices to raise the prices of their dailies and, also forced some leading newspapers to file a suit against the Union Government. The SC upheld press freedom when it categorically assured journalists that "as long as this court sits, newspapermen need not have the fear of their freedom being curtailed by unconstitutional means".



THE SON SHINES, STARS TWINKLE: The Congress(I) has done it again! But instead of a landslide victory, the mountain itself has moved, creating history anew. The three-fourths majority sweep in the eighth Lok Sabha poll could be attributed, among other factors, to the sympathy wave that engulfed the nation after the death of Mrs Gandhi. Also, a majority of women who supported Mrs Gandhi have naturally cast their votes in favour of Rajiv. Evidently the Opposition campaign for a coalition government at the Centre did not appeal to the masses. The

Hindu backlash to the political events in Punjab and the entire RSS votes cast in favour of the ruling party were other factors which brought a massive mandate to Congress(I) and routed the Opposition. Strong opposition leaders have been left to eat humble pie. However, this makes the Congress(I) doubly responsible to the nation. For viable Opposition, sure enough, is a necessary adjunct in a democratic polity. Moreover, what the filmstar-turned-MPs will foretell for the country's future, is yet to be seen.

It was the primary duty of all courts to uphold the freedom of speech and expression and invalidate all laws or administrative actions which interfered with it, the court held. Withholding of government advertisements, imposition of taxes on newsprint and canalisation of import of newsprint in order to make it unjustly costly, were some of the ways by which the governments had tried to interfere with the freedom of the press, the court pointed out.

In another verdict, the SC removed the inequities in the property law enforced in Delhi and, in the process, has also provided relief to building owners—especially those living in their own houses or possessing flats built by corporate societies. By introducing the "standard rent" concept, it has laid down new principles to govern the method of assessing house tax. According to the three judge bench, standard rent and not market rent should determine rateable value on the basis of which tax assessment is made. It has thus sought to link tax directly to the cost of construction rather than to the speculative value of land. Till this day, the municipal authorities were calculating tax on the actual rent received. This had caused distortions between old and new building rates and between those who lived in their own houses and those who rented them out.

The Bench has also made it abundantly clear that in cases of there being two or more methods of fixing dues from citizens, the section favouring the payee should be applied. Taxmen have been ordered to make independent assessments for calculating construction costs.

The SC verdict is beneficial for two other categories of owners. Firstly, those who build their houses in stages will no longer be required to add value of land each time for the determination of tax on the new additions. Secondly, those who rent out a part of their building while occupying a part of it themselves will now be entitled to pay property tax based on "hypothetical" and not actual rent, i.e., a "reasonable rent" that can be fetched by a building.

The SC verdict on house tax has, therefore, succeeded in injecting rationality into the tax structure. The proposed restructuring of the Delhi Rent Control Act may ensure free flow of private funds into the residential units.

A third judgement ordering the Union Government to release due dearness allowance (DA) arrears of Class III and IV Central Government

employees before February end was a welcome move. Additional and ad-hoc DA to these employees had been due on Jan 1, Feb 1, Apr 1 and Jun 1 last, but had been withheld because of the general elections. Withholding of DA arrears is both unconstitutional and illegal. The SC has also ordered the government to pay penal rates of interest on pension and gratuity if these have not been paid to an employee within two months of his retirement. In doing so, the highest court of justice has provided substantial relief to people weighed down by inflation.

NCAER REPORT PLANS AND PREDICTIONS

A mid-year review of the second quarter of 1984 (July–September) by National Council of Applied Economic Research (NCAER) predicts a nearly 5% growth in gross national product (GNP) compared with 1.8% in 81–82, 5.2% in 82–83 and 8.5 in 83–84. The report attributes this growth to timely and widespread moratorium for the second year in succession which predicts a good performance in agriculture. There has, however, been no reduction in the trade deficit but a notable rise in foreign exchange reserves.

The NCAER makes several other observations too. The proposed public sector outlay of Rs 1,80,000 crores at the 84–85 prices for the Seventh Plan, though 84% higher than that of the Sixth Plan, is only 21% higher in real terms.

Also, since in the Seventh Plan balances from current revenue at the base year were "negative", rather than contributing to the financing of the Plan, resource mobilisation of a much higher magnitude is needed. This has resulted in a gap of Rs 40,000 crore—22% of the Plan size. The report recommends additional internal resource mobilisation as a method for diminishing this gap.

Exports present an encouraging picture—a result of continued growth in industrial production. Industrial growth, observes the NCAER, picked up during the subsequent months of '84 especially that of infrastructural industries like coal, steel, cement, petroleum, crude and electricity. And finally, the report stresses the major role the manufacturing and service sectors will have to play in achieving this target growth.

J.S.



SMOOTH SUCCESSION: Yuri Andropov's death was inevitable. Brezhnev's successor 15 months earlier, the Soviet President and General Secretary of the Communist Party of Soviet Union had been suffering from heart disease, kidney trouble and diabetes and his end, when it came on Feb 9, was rather expected. As always, things moved swiftly and smoothly behind the Iron Curtain with Konstantin Chernenko, 72, moving in to fill the void. The transition was quiet, calculated and overtly uneventful.

SRI LANKA

CRISIS DEEPENS

Since Nov 19, 1984 over 400 lives have been lost in sectarian violence in Sri Lanka. The government imposed emergency and indulged in some violence of its own. Air Force fighters and naval vessels attacked boats believed to be bringing guerillas from Tamil Nadu to Mannar in the north-west coast and the government claimed that 10 people had been killed. On Dec 3 the same year 20 guerilla suspects in custody were killed while trying to escape an attack by their comrades. The guerillas attacked two farm settlements and farmer convicts and their families in the Mullaitivu and Vavuniya districts in the north-east and 80 Sinhalese were said to have been killed in the attack. They also killed several people in the two fishing villages of Kukkilai and Nayaruvu in Mullaitivu.

In the second week of December, the security forces detained 300 suspected Tamil separatists during a two-day weekend swoop and a 42-hour curfew was imposed in a number of areas. Sources said that the arrests were "indiscriminate" and included women, in an effort to spread fear among the people. They also attacked Indian fishing boats and the fishermen claimed that they were well within Indian territorial waters when attacked. The Sri Lankan Government believes that at least 4,000 Sri Lankan Tamils may be undergoing guerilla training in India.

India has steadily rejected such allegations and has, in turn, stated that Sri Lanka is trying to build up a war psychosis in the country. Meanwhile, President Reagan's ambassador at large, Gen Vernon Walters, made his second visit to the island in 13 months. Though the Colombo foreign office opted to remain tight-lipped about the visit, the government media indicated that US arms supplies to Sri Lanka had been on the top of the agenda during the meeting.

On another front, President Jayewardene proposed an amendment to the Constitution for the creation of district and provincial councils and a council of state or second chamber for resolving the island's ethnic problem. Draft bills for the X Amendment which would set up such councils were presented by him to an all-party convention on the ethnic issue, which reconvened in Colombo on Dec 14. Except for the All-Ceylon Tamil Congress, all other Tamil parties, including the Tamil United Liberation Front (TULF) attended the conference but the Supreme Council of the Mahasangha of the Buddhist clergy was absent.

At the end of the conference, Jayewardene requested the delegates to inform him in writing of their views on the 'package' of measures suggested by him to ensure "parliamentary democracy" starting at the village level. The delegates' proposals, he said, would be gazetted and examined by the Supreme Court. He added that he and the Supreme Court may decide on a referendum or a general election if it became necessary. However, all this proved to be an exercise in futility. Shortly after Jayewardene issued his statement hinting at a referendum, Tamil separatists launched a big attack on the army camp at point Pedro at the northern tip of Jaffna peninsula. Two police inspectors of Jaffna were also abducted and a ransom of Rs 50 lakhs was demanded for them. Faced with mounting opposition from the Sinhalese Buddhists, the Sri Lanka Cabinet dropped the government proposals for resolving the ethnic problem on Dec 26. And the killing goes on...

US-USSR

TALK OF TALKS

Soon the US Secretary of State, George Shultz and the Soviet Foreign Minister Andrei Gromyko will meet in Geneva to discuss the resumption of arms control talks. Meanwhile, both sides are seeking solidarity with their own blocs to improve their positions at the negotiating table. The North Atlantic Treaty Organisation (NATO) met at Brussels and decided to boost conventional forces in Europe. The 13 NATO defence ministers agreed to spend \$7.8b over the next six-year period for a variety of improvements ranging from bomb-proof aircraft shelters to building a better communications network. The budget for spending on infrastructure is 40% more than that spent in the last six-year period. The respective countries also agreed to increase ammunition stocks.

On the other side of the Iron Curtain, the Warsaw Pact foreign ministers met in E. Berlin and declared that the East bloc allies "will not allow themselves to fall into a situation of inferiority". They, however, followed a conciliatory line and words of praise for the Shultz-Gromyko meeting were included in the final communique. The defence ministry counterparts, who were meeting in Budapest were less moderate, and the Hungarian Defence Minister, Lajos Czinege, stressed the importance of "preparedness" to counter any NATO aggression. However, the Soviet news agency, Tass, ignored the hardline expressed at Budapest and gave full coverage to the foreign ministers' conference instead. Soviet leader Konstantin Chernenko even told a visiting American industrialist, Armand Hammer, that he was ready to meet Ronald Reagan if Washington renounced the first use of nuclear weapons. In a bid to win hearts, the US too is being somewhat conciliatory and a relatively moderate Paul Nitze has been appointed Shultz's Chief Adviser for the Geneva talks.

In domestic developments, the Soviet Defence Minister, Marshal Dmitri Federovich Ustinov, died in late December. He had been ailing for some time and had not been seen in public since Sep 27, 1984. He had headed the military for the last eight years and had been closely associated with Soviet defence since the beginning of World War II. He was also one of the senior-most members of the politburo of the Soviet Communist Party and had been Deputy Prime Minister between 1957 and 1963 and had been the First Deputy Prime Minister between 1963



Courtesy USIS

THE WALK THAT WAS: When the American astronaut, Bruce McCandless floated into space, 165 miles above Hawaii, he actually had no links with the earth. He was untethered from the orbiting spacecraft, Challenger, which had left him to fend for himself. He carried a television camera, no doubt, to relay live pictures back to the orbiter and to earth—lest he opted to stay back in the serene void, far from the maddening crowd!

Picture shows McCandless looking like a modern-day Buck Rogers as he models the extravehicular mobility and back-pack manned manoeuvring units. The circular object in front enables a floating spaceman to dock with the orbiting spacecraft while performing repairs and other maintenance work.

and 1965. Shortly after his death, Marshal Sergei Sokolov was appointed new Defence Minister. Sokolov was one of the three Deputy Defence Ministers.

ISLAMISATION IN PAKISTAN HOLY HOAX

On Dec 1, 1984, President Zia-ul-Haq, in a surprise TV appearance, announced that he would hold a referendum on Islamisation in Pakistan. The referendum, it was said, would also act as a de facto presidential election since a "Yes" vote on the Islamisation programme would mean that Zia would be regarded as elected for a five-year term and he would be given the mandate to amend the Constitution and make it thoroughly Islamic before restoring it and withdrawing martial law. Elections to the Parliament would then follow but the members of the new Assembly would not belong to political parties and the Parliament's powers would be limited by Quranic injunctions. The 11-party opposition Movement for the Restoration of Democracy (MRD) stated that the referendum was "the greatest hoax in the name of Islam in 1400 years", called for a boycott and appealed for a "no" from those who found themselves compelled to vote.

Nevertheless, the referendum was held on Dec 19, 1984, and more than 60% of the votes were cast in favour of Zia and Islamization (according to election officials, 98% of the votes cast were in Zia's favour). In the capital city of Rawalpindi, Zia got 69,546 votes out of a total of 1,48,565 and only 2,123 votes were cast against him. The results were not surprising, considering the stringent restrictions under which the referendum was held. It was organised by the army and held under martial law. Opposition leaders were rounded up from all over the country a week earlier. No canvassing was allowed, the courts were immobilised and news was censored. Calling for a boycott was forbidden and army personnel and civil servants were required to vote a few

days earlier, to ensure that the [] went off smoothly. After the MRD appealed for a boycott, Zia waived the requirement that identity cards should be produced during voting and thousands of unregistered voters were allowed to vote. In spite of all this, the voter turn-out was low. As such, the endorsement is hardly an endorsement. What matters now is that Zia intends to stay in power and for this, he will push through changes in the 1973 Constitution to make it conform to his view of an Islamic political order.

NICARAGUA

ONE UP ON THE US

The International Court of Justice at The Hague has ruled that Nicaragua has a right to bring a suit against the US for its support of the Contras and to seek damages for the guerrilla activities. The dispute had arisen when in February-March, 1984 the US-backed rebels had claimed the responsibility for mining Nicaragua's harbour. The Sandinistas took the matter to the UN Security Council and when the US used its vote to block the resolution, the Nicaraguans took their complaint to the World Court. In a pre-emptive strike, the US asserted that it would not accept the "compulsory jurisdiction" of the court over any Central American matter for the next two years. The court recently rejected this argument.

Since the Court is widely accepted as non-partisan, the US has lost face. Jurists from American-ally countries like Britain, W. Germany, Italy and Japan ruled in favour of Nicaragua. In fact the only dissenting voice was of the American judge, Stephen Schwebel. The real case will now come before the Court and after Nicaragua presents its documents. America will have its chance to respond. But whether it will do so is the question. If the US decides to defend itself, it may well lose the case and have its efforts to end, what it calls, Nicaraguan subversion in Central America, declared illegal. Some US officials feel that it can win if it releases classified intelligence information to prove that Nicaragua has been actively aiding leftist insurgency movements in El Salvador. The US may not be willing to reveal such information, especially because victory in the World Court is not guaranteed even if such disclosures are made. The Americans can also refuse to fight the case and ignore any decision that the Court may come to, since it has no power to enforce its ruling. In fact in the last 15 years, several nations including India, France, Iceland and Iran have refused to submit to its rulings. But this would mean a greater loss of face for America, which has long been viewed as a champion of the rule of law.

While the US faces its dilemma, the Nicaraguans are exhilarated. According to Paul Reichler, an American attorney who helped represent the Sandinistas at the World Court, the "Reagan Administration has to decide whether the US is for or against international law". Meanwhile, the war of nerves between the two countries continues. The Nicaraguans followed up their World Court victory by accepting a regional non-aggression treaty proposed by the Contadora group (Columbia, Panama, Venezuela and Mexico) "in its totality and without modification". The US supported the Contadora deliberation but proposed some amendments to the draft.

On its part, the US again claimed that it had sighted six Soviet ships laden with arms, bound for Nicaragua. In November, they had alleged that Soviet ships had unloaded MiG-21 fighter planes at the port of Corinto. This time it did not specify what arms the ships were carrying since their last allegations had proved to be false. However Reagan warned that if sophisticated Russian aircraft were sent to Nicaragua, then "we can not sit back and just take it".

SINO-BRITISH AGREEMENT

HONG KONG ON A PLATTER

Two years after the Sino-British talks began, Chinese Prime Minister Zhao Ziyang and British Prime Minister Margaret Thatcher put their signatures to a 42-page agreement that will turn Hong Kong over to Chinese control on Jul 1, 1997. To assure the people of Hong Kong that China will honour the agreement which guarantees them 50 years of free market autonomy Zhao said, "It is a tradition of the Chinese nation to act in good faith."

Hong Kong's qualified endorsement of the agreement came out in a 53-page report in November. Over 670 organisations and 1,815 individuals had been asked their opinion in a sample survey and it was found that most of those polled had "reservations about China's ability to implement the provisions of the draft agreement." Shortly after the British parliament voted on Dec 5 in favour of the agreement, a delegation of Hong Kong citizens expressed their concern to Westminster that



FOR WANT OF FOOD: Ethiopia is a land famished. In the worst famine in African history, 3,00,000 people have already starved to death in this parched country. Its inhabitants have been reduced to hideous mockeries of life, virtual skeletons who have even forgotten how to eat. In this world where some have more food than they know what to do with, here's a nation perishing for want of food. The affluent world, suddenly awakening to the pathetic plight of this starving humanity, has begun to send in vast outpouring of a belated concern and generosity. But it is too late for those already dead and may well be too late for the dying as well.

passaports issued by the territory after 1997 may not be honoured internationally. Prime Minister Thatcher has promised that Britain will persuade other countries to honour Hong Kong's passports.

The Hong Kong agreement is a feather in Chinese strongman Deng Xiaoping's cap. Yet another feather was added three days after Thatcher's departure from Beijing when Ivan Arkhipov, the First Vice Premier of the Soviet Union, paid a high level visit to China, the first of its kind since 1969. The visit was successful and three economic cooperation pacts, including an agreement to set up a Sino-Soviet committee for the promotion of economy, trade, scientific and technological cooperation, were signed. The other two agreements deal with technical collaboration on production technology and knowhow and exchange of scientific and technological scholars and experts. The official Chinese news agency, Xinhua, also reported that the two sides agreed to expand bilateral trade by about 28% in 1985.

LATIN AMERICA

DEMOCRACIES AND DICTATORSHIPS

Uruguay became the latest country in South America to join the democratic club, when elections held in early December returned Julio Mario Sanguinetti of the moderate Colorado Party. The party won 40% of the votes compared with the centre-right Blanco Party's 34% and the leftist coalition Frente Amplio's 21%. Sanguinetti will take over his office in March.

Uruguay has a long democratic tradition. This was, however, interrupted in 1973 when a 24-member military junta seized power from an ineffectual civilian government. Four years ago, the generals miscalculated and held a referendum on certain of their proposals. These were overwhelmingly rejected and the military finally agreed to hold elections. Thus, a civilian government has returned after 11 years of military rule. However, it faces some serious challenges: a 45% infla-

tion rate, a 15% unemployment level, a \$5.2b foreign debt and a huge police and military establishment, so bloated that one out of every 43 Uruguayans is a man in uniform.

The other Latin American countries to replace dictatorship with democracy in the past few years are Argentina, Bolivia, Panama, Honduras, Peru, El Salvador and Ecuador. Brazil and Guatemala will hold elections next year and may become democracies too.

In Chile, however, President Augusto Pinochet Ugarte's rule is as repressive as ever. Early in December, a two-day protest was planned against his regime. Before it could take place, the police made scores of arrests of leftist political and labour leaders, and during the protest days troops were posted every 100 yards in Santiago, while armoured cars and troop transport vehicles roamed down the streets. During the protest, 160 people were arrested, including two Roman Catholic priests and a deacon. The scare tactics proved effective as most schools and shops remained open and several leaders of the five-party Alianza Democratica, the main opposition group, did not endorse the protest in fear of rubbing the government on the wrong side.

In the past 18 months, about 110 civilians have lost their lives in street demonstrations, but Pinochet has refused repeated and widespread demands that he relinquish power to a democratically elected government. As it appears, he is prepared to hold on to power, by military force if necessary. In late December, he further extended a state of emergency declared on Nov 6, 1984, for another 90 days. This empowers the military government to restrict press freedom, ban meetings and send "offending" people into domestic or foreign exile.

GRENADA

ELECTING DEMOCRACY

Not so many months after America invaded Grenada to save the small Caribbean island for "democracy", Grenada is on its way back to democracy as the Americans see it, and the citizens are not complaining. The island held its first election since the invasion on Dec 3, 1984 and it was won by middle-of-the-road Herbert Blaize, whose New National Party won 14 of the Assembly's 15 seats. It won 59% of the votes, while its closest opponent, the former right-wing Prime Minister, Sir Eric Gairy's Grenada United Labour Party (GULP) won 36% of the votes. The revolutionary pro-Cuban party which had ruled Grenada from 1979 till the American invasion a year ago, got only 5%.

Blaize is President Reagan's man, and the Americans pumped a lot of money into his campaign as was evident from its lavishness. Gairy, too, claimed that he had Reagan's approval despite a public rebuff from Washington. America, therefore, has nothing to fear from the island by way of a leftist resurgence in the near future. The leftist party, the slain Premier Maurice Bishop's New Jewel Movement, renamed itself the Maurice Bishop Patriotic Movement (MBPM) and tried to distance itself from the harsher memories of the 1979-83 revolutionary street. Its new leader, Kenrick Radix claimed that the MBPM was basically a moderate left-wing nationalist party and denounced Blaize as America's surrogate slave-driver. However, the twin campaign was in vain and America's victory was a victory for the American invasion.

The critics of the invasion still say that it was illegal, immoral, unnecessary and bad for international security. The Commonwealth and the UN also refused to send observers to the elections. However, under the circumstances since Grenada has so evidently accepted the American "biz stick", conclusions are being re-drawn.

PLO

FUTILE EXERCISES

The 17th session of the Palestine National Council was held at Amman in late November '84. The split in the movement between the Syrian-based faction and Arafat's followers was quite evident but Yasser Arafat emerged as the leader of the more representative part. The Council asserted its independence of Syria, which has been trying to overthrow Arafat for some time.

Although Arafat's hold over the Council appears to be strengthened, nothing major happened by way of a new peace initiative to bring Israel to the negotiating table. The one country that can help Arafat to do so is Jordan, but no joint position emerged on Israel, although there was talk of a joint Jordanian-Palestinian committee being set up in the future. While King Hussein of Jordan wants to base any initiative on the United Nations' Resolution 242 which calls for an Israeli withdrawal from the territory it occupied during the 1967 war and which both the Arab states and Israel accept, the Palestinians are not in favour of it because it refers to them as a "refugee problem".



LOS ANGELES OLYMPICS—OF BOYCOTTS AND BEATINGS: The XXIII Olympics left an indelible mark on the memories of many. Held in Los Angeles (USA) for a fortnight from Jul 28, these Olympics have become famous on numerous accounts. Conspicuous by their absence were Russia and the East Bloc countries who collectively boycotted the Games. Then, America established its convincing superiority by winning 83 golds, 61 silvers and 30 bronzes—a total of 174 of the 687 medals altogether. Twenty-three-year-old black American Carl Lewis alone bagged four golds equalling the world record of his fellow countryman Jesse Owens. America's latest gymnastic protegee Mary Lou Retton captured hearts by her agile tactics in the gym and her charming personality. The first-ever Games with industry-support, these Olympics amassed a staggering, all-time high profit of over \$160m.

Theoretically, however, Arafat is in a stronger position than before. The Council approved of his earlier controversial visit to Egypt and also gave the executive committee freedom to "define the PLO's future relations with Egypt". The new Arab axes of Egypt, Jordan and Iran would also encourage him to negotiate with Israel. The new Israeli Prime Minister, Shimon Peres, accepts the principle of territorial compromise in return for peace. The only problem is that no one is ready to make the opening bid, and meanwhile the West Bank and Gaza, over which the Palestinians seek the right to self-determination, are slowly being woven into the Israeli fabric as more and more Israeli settlers are moving in.

An event which occurred around the time of the Council meeting also showed that, despite outward niceties, no country is still ready to negotiate. Abdel Wahab Darawsha, an Arab member of the Israeli Knesset, wished to go to Jordan to attend the Council meeting. He wanted to tell the PLOs that they must stop calling for the destruction of Israel and expressed his view that Israel should end the occupation of the West Bank and Gaza. The Conservative Likud Party was very critical of Darawsha and even the Labour Party, of which he is a member, reprimanded him. Only left-wingers sung his praises. However, it was not just Israel which did not want him to go to Amman. Jordan, too, did not give him a visa because, it appears, that the Palestinians did not want him to sit-in at the meeting.

THE KOREAS

BACK TO SQUARE ONE

There is many a slip 'twixt the cup and the lip. Matters have again cooled between North and South Korea and the "slip" occurred when Vasily Yakovlevich Matuzok, a trainee diplomat with the Soviet Embassy in Pyongyang defected to S. Korea, in a dramatic 15-minute escapade. He ran across the joint security area in Panmunjom after posing as a tourist and entered the UN command controlled side of the area where N. Korean personnel are strictly banned. Gunfire ensued from both sides and three N. Korean and one S. Korean soldiers were killed and some others were injured. The defection was a grave matter because, according to official sources, Matuzok was a language officer proficient in Korean and had been present during meetings between N. Korean top officials and the Soviet Ambassador, N.M. Shubnikov. Recently, N. Korea's relations with Moscow have been troubled and Matuzok could let out important information.

The defection and the subsequent shooting occurred at an inopportune moment.

because the two sides appeared to be resuming peaceful contacts of late. They had been discussing the possibility of economic exchange and the launching of a joint team to compete in the Olympic Games scheduled for 1988 in Seoul. The S. Korean Government condemned the N. Korean action and the S. Korean President Chun Doo Hwan stated that Pyongyang's violation of the armistice agreement had poured "cold water" over the North-South negotiations. Pyongyang declared that Matuzok had not defected but had been "abducted" by UN command personnel. It also informed Seoul that it was postponing trade talks till 1985. However, in a conciliatory aside it also stated that it hoped that Seoul would take "a responsible step" to eliminate the tension created by the incident so that talks could resume.

The Korean region is a potential hot spot and may some day be the venue for another war. As the Matuzok incident shows, tension escalates fast in the demilitarised zone. A similar incident had occurred in August 1976, when N. Korean troops had murdered two American guards, who were trying to break the branches off a tree not far from where the Matuzok incident took place. The US mobilised its tanks on the demilitarised zone and UN command troops hacked down the trees which the North had planted to protect their observation posts from being viewed by their enemies. Following this episode the number of armed guards in the joint security area was limited to 35 on each side and they were to carry only handguns. In the present incident, N. Korean soldiers pursued Matuzok into the UN command controlled side, much to the chagrin of Seoul. World leaders played down the incident for most parties are interested in promoting current North-South contacts. However, further incidents could jeopardise attempts at negotiations.

AUSTRALIAN ELECTIONS

SLIGHT SWOOP FOR HAWKE

The Australian elections of Dec 1, 1984, held a surprise for Prime Minister Bob Hawke. A landslide victory had been forecast, but there was a uniform 2% swing throughout Australia to the opposition Liberal and National parties. The middle-of-the-road Labour Government's majority was cut from 26 in a House of Representatives that had been enlarged from 125 to 148 seats. The Labour Party also lost its chance to control the senate and the small Democratic Party holds the balance of power there.

The Labour Party tried to explain its losses by saying that it was the result of the changed voting system. Earlier, voters had to number all the candidates in order of preference on their ballot papers and many papers were invalidated if this was not done. This time, the process was simplified. While this change was brought in for the senate ballot papers, the system for the House of Representatives remained unchanged. However, many Australians were confused and marked one box in the House ballot papers as well. The result was that the number of invalid votes for the House jumped from 2% to 7%. The Labourites say that most of the muddled voters were Labour supporters, which, if true, does not speak very well for them.

What probably happened was that there was a last-minute swing to the Liberals. In a recent television debate, the Liberal leader, Andrew Peacock, bettered Hawke in performance. The overall effect of the election, however, is not so serious for Hawke. Although he is now being publicly criticised from all sides, including his Labour colleagues, for his policies, his voting-system goof and his style of leadership, he will perhaps tone up his government and will be more discreet.

UNESCO

CHARGED FOR CORRUPTION

On Dec 19, 1984 the US formally withdrew from the United Nations Educational, Scientific and Cultural Organisation (UNESCO), because it felt that there was "extraneous politicisation" as well as "an endemic hostility towards the institutions of a free society, particularly those that protect a free press, free market, and above all individual human rights" within the body. Last year when the US had threatened to leave, it had been the only country to take such a step. Recently, however, Britain too gave notice that it may withdraw. W. Germany, Denmark, Canada, Switzerland, the Netherlands and Japan, too, may follow suit unless corrective action is taken. Their basic complaint is common: that UNESCO is politicised, inefficient and corrupt. About 85% of UNESCO's budget comes from the western countries and Japan. The US withdrawal is serious because it financed one-fourth of the agency's \$200m two-year budget.

UNESCO, however, has many friends in the Soviet bloc and the Third



ON THE HIT LIST: On Oct 12, 1984 it was the British PM who became a target of the outlawed Irish Republican Army's (IRA) terror tactics. In their latest act of savagery, these underground terrorists tried to assassinate Margaret Thatcher. A deadly bomb was planted in Brighton's Grand Hotel where Mrs Thatcher and members of Britain's Conservative Party were staying for the annual party conference. The explosion ripped through the hotel and while four prominent Tory politicians were killed and 34 injured, the PM had a miraculous escape—

as she had, just two minutes earlier, vacated her suite's bathroom which was demolished. The IRA immediately assumed responsibility for the inhuman act and added, rather ominously, "Today we were unlucky, but remember, we have only to be lucky once". As for Mrs Thatcher, she exercised remarkable self-control in the face of a harrowing experience. Said she—"Life must go on,"—demonstrating the mettle this Iron Lady is made of!

World countries. Among UNESCO programmes which have linked the western bloc is the so-called New World Information Order, which seeks to help developing countries counteract the commercial power of the western press and calls for licensing the restrictions on journalists. Many of the western leaders do not approve of UNESCO's present Secretary-General Senegalese Amadou Malitar M' Bow and blame him for mismanagement and corruption in the agency. They have been pressuring him to step down for some time but he has recently affirmed that he has no intention of doing so till his term expires. However, he will have to take strong measures to cut down the budget of UNESCO and it is believed that the severest cuts will be made on non-controversial projects like literacy campaigns.

NEW CALEDONIA

TROUBLE FOR FRANCE

French President Francois Mitterand is already neck-deep in domestic and other troubles. And now a new one has been added—New Caledonia, where the native Melanesian, or Kanak, population appears to be set on ending 131 years of French rule over their South Pacific island. The Kanak community makes up 44% of the territory's 1,44,000 population, the rest being white or other settlers. Initially, their revolt had seemed merely exotic, but it took a violent turn in December '84.

Trouble began when the Kanaks, led by the Kanak Socialist National Liberation Front (FLNKS) boycotted elections for a territorial assembly on Nov 18, 1984. The anti-independence party, Rally for Caledonia in the Republic, which is dominated by French and other settlers, resultantly swept the polls. The Kanaks raised their own flag and their leader Jean-Marie Tjibaou, declared a provisional government. In the ensuing riots a white municipal official and a Kanak separatist were murdered and in early December '84 a group of rebels returning from a night-time meeting were ambushed and 10 of them were killed. Tjibaou, who lost two of his brothers in the ambush, however, offered to end hostilities if the government released 17 Kanaks detained by French authorities on charges of disturbing the peace.

Mitterand has sent cabinet veteran Etienne Pisani to find a solution to the problem. Pisani has agreed to Tjibaou's terms regarding the Kanak prisoners. He also stated that he hoped to formulate a plan by Jan 5 on the territory's future and he would give the various factions a month to come to an agreement.

The solution, however, is not as simple as it sounds. The white and

other settlers are opposed to a Kanak-dominated independent state and many of them believe that Francoist Australia, which is nearby, is abetting the Kanak militants, some of whom claim that they had received military training in Libya. Mitterand, on the other hand, has hinted that the government may hold a referendum in New Caledonia this year, instead of in 1989, as previously planned. This has been opposed by Gaullists at home who feel that Mitterand is preparing a sell-out. However, the Kanaks feel that if the referendum is delayed, it may never be held because France goes to the polls in 1986, and in the case of a defeat for Mitterand's Socialists in the Parliament, their successors may take a different line on New Caledonia. Mitterand could also decide to separate the territory on ethnic lines, but as the examples of Cyprus, Lebanon and N. Ireland show, this is not a feasible solution.

KUWAITI PLANE HIJACK

VIOLENT HEIGHTS

One of the most brutal hijack dramas occurred in December '84 when Kuwait Airways Flight 221 to Karachi was hijacked by terrorists believed to be linked to the Hizballah (Party of God). Some US officials believe that this is the same pro-Khomeini Shi'ite group which bombed the US Embassy and marine barracks in Beirut last year, killing over 300 people. The Kuwaiti officials had taken a tough stand on the occasion and 17 terrorists had been brought to trial and sentenced to death or prison terms. It was in the hope of forcing Kuwait to release the jailed terrorists that Flight 221 was hijacked.

The aircraft was taken to Teheran's Mehrabad Airport and the drama continued for six days. The hijackers released 153 hostages in batches, but four other hostages were killed by them, two of them American. The Americans were possibly killed to gain, what they hoped would be, Iranian sympathy. They brought out a Kuwaiti passenger on the landing steps and severely beat him up to demonstrate their intent.

Meanwhile, they carried on sporadic negotiations with the Iranian authorities. With 10 hostages remaining and the hijackers threatening to blow up the aircraft (for added effect they even read out their last will and testament) the Iranian authorities decided to act. Commandos moved in, disguised as airport workers, after switching off the floodlights around the plane. A smoke bomb was set off, there was shooting on both sides but no one was killed although the windows of the aircraft were shattered by gunfire. The storming was successful, the hostages were freed and four terrorists were captured. The outcome of this is that Kuwait decided to award death penalty for such crimes. S.B

A to Z of SCIENCE

In an age where high-tech computers are replacing the human brain and plastic pumps the heart, where nuclear physics is opening new vistas while nuclear war looms large on the horizon, where chemists are achieving breakthrough in life-saving drugs while poisonous chemicals and pollution threaten the living planet—lack of scientific knowledge can prove to be a serious handicap both in personal and competitive life. To equip you substantially with the apparatus of scientific knowledge, a comprehensive feature on the A to Z of Science.

SPACE

Cosmic Encounters

Do celestial events pose any threat to life on earth? Man had long believed that celestial apparitions such as comets were a bad omen. But most such beliefs were based on nothing more than sheer ignorance. Recent scientific studies, however, indicate that celestial objects such as comets or asteroids may indeed have had great influence on life on earth in the past. It is now widely accepted that at least some of the large-scale biological events on earth, such as the sudden disappearance of the giant dinosaurs some 65m years ago, were possibly triggered by a comet or asteroid strike. Scientists believe such collisions would have kicked up enough dust into the atmosphere to block sunlight for months and chill the earth leading to large-scale death of the dinosaurs.

But not all such collisions need be catastrophic. Most of them leave only minor scars. The famous Barringer Crater in Arizona, USA, for example, was formed when an asteroid fragment, 45 m in diameter, came down with tremendous impact some 25,000 years ago. The crater is 183 m deep and 1,200 m across. The Lonar Lake in Rajasthan is also believed to have been formed by an asteroid hit.

In recent history, a minor fragment of a comet is believed to have struck central Siberia near the Tunguska river in USSR on Jun 30, 1908, flattening more than 15,000 sq km of forest. When the object hit the upper atmosphere, it is said to have outshone the sun. More recently, on Aug 10, 1972, a small asteroid entered the upper atmosphere over Utah in the US and was visible as a bright object in broad daylight during its 1,450 km passage through the atmosphere before it bounced back into space over Alberta in Canada. It did not hit the earth as it entered the atmosphere at too shallow an angle. Scientists estimate that if it had dipped just a bit deeper into the atmosphere, it would have struck with a force equal to that of a nuclear bomb!

It is now accepted in scientific circles that the mass extinction of the dinosaurs 65m years ago was not the only one of its kind in the earth's long geological history. After studying fossil records of animals that lived at various periods during the past quarter of a billion years, two scientists from the University of Chicago, USA, have come up with the amazing theory that large-scale extinctions apparently are not unique, rather, they occur in cycles—once every 26m years or so. Possible mechanisms for such a cyclic event have also been proposed recently.

One of the commonest objects to hit the earth from space are meteorites. These stony chunks of rock of varying sizes are fragments of asteroids, hoards of which orbit the sun between Mars and Jupiter. Normally, the orbit of asteroids do not take them anywhere near the earth. But there are a few small groups which move in orbits that intersect the earth's orbit (astronomers call them "earth crossers"). Occasionally, a member of one such group approaches quite close to earth as happened in August 1972, and may even hit the earth. However, a direct hit by an asteroid is unknown, although small fragments regularly reach the earth's surface as meteorites.

The second class of objects that may possibly hit the earth from outer space are comets or their

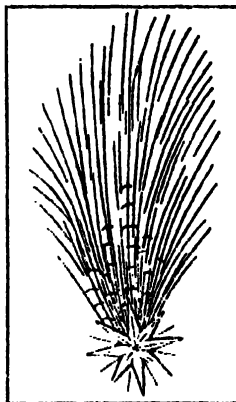
fragments. The famous Tunguska event in 1908 was caused by a 35-m chunk of Comet Enke which returns every 3.3 years. Normally, however, the appearance of a comet is a rather irregular and unpredictable phenomenon. Often, they appear without any prior warning. But rarely do their paths bring them close to earth.

According to a theory developed by the American astronomer Fred Whipple, a comet may be described as a 'dirty ice-ball'. Its core is made up of a conglomerate of rocky fragments held together with frozen gases such as ammonia, methane, carbon dioxide and ice. When a comet approaches the sun during its round trip across the solar system, these substances evaporate giving rise to the most prominent feature of a comet—its beautiful 'tail'.

The origin of comets is still a matter of debate, but it is now accepted that they belong to the solar system. According to the Dutch astronomer Jan Oort, there is a reservoir or 'cloud' of comets girdling the solar system at a distance of a light-year or so (1 light year = 9,500b km) from the sun. A comet from this cloud strays into the solar system whenever the cloud is disturbed by any celestial event such as the passage of a nearby star. Once set loose from the cloud, the comet

From 1 to 3:

1. The first surviving drawing of Halley's Comet appeared in the Nurnberg Chronicle.
2. The first-ever picture of this comet was taken in 1910.
3. Astronomer Edmund Halley after whom the comet was named.



AD 684



1910



1759



Seven smiles: The record seven-member crew of the space shuttle *Challenger* beaming in unison.

travels sunward, its path determined by gravitational effects of the planets of the solar system, particularly Jupiter and Saturn.

Two theories have been put forward to account for the 26-m year cycle of mass extinctions in the past. Both presume a higher than normal rate of dislodgement of comets from the Oort cloud at regular intervals, but by different mechanisms. According to one theory put forward in 1982 by two astronomers of the Edinburgh Royal Observatory, the Oort cloud is disturbed by dust clouds in the Milky Way every time the solar system crosses the galactic plane during its motion around the galactic centre. This happens once in every 33m years, but the astronomers feel that "considering the great difficulties and uncertainties involved in geological dating and measurement of large-scale astronomical motions, 26m and 33m years seem quite close".

The other theory, the brainchild of a University of California professor, invokes the existence of a dim, undiscovered companion of our sun which moves in an orbit that brings it close to the solar system, and hence the Oort cloud, once every 26m years or so. As the star, named *Nemesis*, approaches the sun, its gravitational pull disturbs the Oort cloud "spilling comets from it and causing an extinction".

Whatever the cause, however, life on earth is in no imminent danger of extinction from celestial collisions. According to palaeontologists, the last large-scale deaths of animals on earth took place about 11m years ago. So, even if there is a cosmic trigger, the next phase of mass extinctions would not be due for at least another 15m years.

Man In Space

When manned space flights began with the historic voyage of Yuri Gagarin on Apr 12, 1961, the missions were mainly exploratory. Their main objective was to find out if man could go and work in space. Today, manned space missions have become a routine endeavour and the missions are more business-like. They are being used for a variety of commercial applications such as to launch satellites cheaply, to observe the earth for resour-

ces survey, and to carry out manufacturing processes not possible on earth.

In recent years, there have been two major objectives of manned space missions. One, to study the effect of prolonged stay in space; and two, to study the utility of the reusable space shuttle [also known as the Space Transportation System (STS)] to launch, retrieve and repair satellites in space. Significant achievements have been reported in both these areas in recent months.

Three Soviet cosmonauts returned to earth on Oct 2, after a record-breaking stay of 237 days in space, on board the orbiting space station Salyut-7. The American space shuttle missions have been successfully used to launch several communication satellites including India's *INSAT 1B* in August 1983. A shuttle crew successfully retrieved, repaired and again put into orbit the crippled scientific satellite *Solar Max* in April 1984. In another shuttle mission in October, the crew successfully carried out 'refuelling' of a satellite in orbit, an operation which can be used to prolong

of experiments carried out during other shuttle missions have shown that the near absence of gravity in space can make possible production of drugs several times more pure than those produced on earth. Similar results have been obtained in experiments with several unusual materials and metal alloys.

The main attraction of space for scientists and technologists is the near absence of gravity, which they call 'microgravity'. It has long been known that objects become 'weightless' in space. But that does not mean that earth's gravitational force really disappears in space. The fact is that at heights of 350 to 400 kms, the force of gravity is about nine-tenths as strong as at sea level. But the orbital motion of a spacecraft counterbalances exactly the effect of earth's gravity. As a result, both the spacecraft and its occupants become weightless.

On earth, we are accustomed to living under earth's gravitational pull which makes things fall to the ground. It is this force of attraction that gives us the sense of 'up' and 'down'. Our heart, blood circulation, and the vestibular system of the inner ear, which helps us keep our balance, are all attuned to working under the influence of earth's gravity. So when this pull is absent, body systems, unless specially trained or 'conditioned', show unusual behaviour.

It has been known since the early days of manned space flight that weightlessness produced physiological symptoms in men. One of the first noticeable effects of weightlessness is a rapid loss of calcium from the bones which make them brittle. The muscles, no longer needed to support the body against the pull of gravity too become weakened. Also, the absence of gravity makes the astronauts physically taller. Weightlessness also produced a sense of disorientation, dizziness and erratic control of one's movements. These effects varied widely in different individuals. They seemed to be slight in some and overpowering in others. In most cases, the symptoms disappeared after a week or two in space and the body became accustomed to weightlessness.

SATELLITE PLACEMENTS

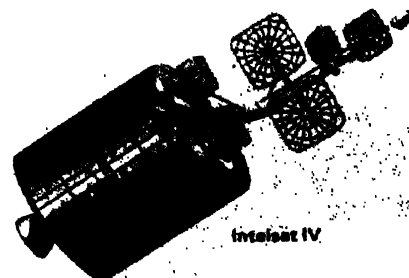
Of Communication Satellites: At least three geostationary satellites placed 120° apart are needed to make world-wide communication possible via satellites.

The C-band: The radio frequency commonly used for communication between two earth stations, via satellite, is between 4 to 8 gigahertz (1 GHz = 10^9 Hz) and is called the C-band.

Low Altitude Flights: Manned space flights are usually low altitude flights, around 400 km above the surface of the earth, because of the presence of very intense charged particles and X-radiations at greater heights. Such low altitude flights take about 95 minutes to orbit once around the earth.

Spacing of Satellites: According to an international agreement, satellites over the equator must be spaced two longitudinal degrees apart—nearly 1,460 km—so as to avoid interfering with one another's signals.

Geostationary or Synchronous Satellites: These satellites are required for relaying of radio and TV signals and for weather mapping. Such satellites orbit the earth with in a



Wanna see bouncy pictures? Well, the only way of transmitting pictures from one side of the world to the other is to 'bounce' radio waves and television signals off a communication satellite. Pic shows satellite Intelsat IV which can also transmit up to 9,000 telephone calls at a time. From '85, Intelsat VI will relay worldwide 33,000 phone calls and four TV programmes simultaneously.

period of 24 hours and thus stay permanently over a given location of the earth. They have to be stationed at a height of nearly 36,000 km above the surface of the earth.

SPACE FEATS

Errant Satellites Retrieved: One of the most spectacular space events of recent times took place in November 1984 when the crew of the US space shuttle *Discovery* brought back to earth two errant satellites, an Indonesian communication satellite *Pelapa-B2* and United States' Western Union's satellite *Westar-6*, each worth about \$35m. for repairs. Both these satellites had been launched in February 1984 from the US space shuttle *Challenger*. Something went wrong with them almost immediately after launch and instead of orbiting in the geosynchronous orbits they were meant for, they were stranded in useless elliptical paths about the earth, at heights ranging from about 210 km-1,330 km above the earth's surface.

Astronauts Joseph Allen and Commander Dale A. Gardner retrieved these canister-type, 9 ft high, satellites from space and brought them back to earth in the cargo bay of their space shuttle.

The crew, which included Commander Frederick Hauck, Pilot David Walker and Anna Fischer, besides Allen and Gardner, first dispatched the two satellites which they had taken in the space shuttle, into space, before retrieving the two errant satellites.

Allen carried the 1,200-lb (545-kg) *Pelapa-B2* satellite overhead, for a trip around the world at a height of about 360 km above the earth's surface moving at a speed of about 28,000 km/hr.

Space Endurance Record: The three Soviet cosmonauts Leonid Kizim, Vladimir Solovyov and Dr Oleg Atkov, who have been manning the space station *Salyut-7*, since Feb 8, 1984, created a new space endurance record of spending 237 days in space. They returned to earth landing in Kazakhstan on Oct 2, 1984. The previous record of 211 days was also held by two of their countrymen. This record will be bettered only by a stay of more than 260 days by an astronaut or a group of them as a new record is set only when it is at least 10% longer than the previous record.

The US astronauts, in comparison have stayed in space for a maximum period of 84 days, the record being held by astronauts Gerald Carr, Edward Gibson and William Pogue, aboard *Skylab 3*, in 1974.

Second Woman Space Walker: Svetlana Savitskaya became the first Soviet Woman to walk in space. She spent nearly three hours in space outside the Soyuz aircraft, testing a welding device, in July 1984.

The first American woman to walk in space is Kathryn Sullivan who performed the feat during her 8-day scientific voyage in the space shuttle *Challenger*, during October 1984.

The maximum number of human beings in space at any one time is, however, 11, a record which was set during April 1984 when there were five Russians along with the Indian astronaut, Rakesh Sharma in the *Salyut-7* space lab and five American astronauts aboard the space shuttle *Challenger*, attempting to repair the damaged *Solar Max* satellite.

MAIDEN-OVERS IN SPACE

USSR Firsts

- First man-made satellite launched on Oct 4, 1957.
- Sent the first living being, an animal (dog named Laika) in space.
- The first man Yuri Gagarin sent in space.
- The first woman Valentina Tereshkova sent in space in 1963.
- The first three-man craft launched.
- The first space mission failed in 1967 when cosmonaut Vladimir Komarov died on return.
- The first woman Svetlana Savitskaya walked in space in July 1984.
- The first pictures of the moon's hidden side were shot by an orbiting Soviet camera.

US Firsts

- The first manned voyages to and from the moon in 1969.
- Unmanned landing on Mars, in 1976.
- The first man-made object (Pioneer 10) to leave the solar system, in 1972.
- First space repair job in an orbiting space shuttle *Challenger* performed on the disabled *Solar Max* satellite on Apr. 19, '84. On this flight Bruce McCandless became the first human being to walk in space without a lifeline.
- Retrieval and return of two errant satellites from space, back to the surface of the earth, in November 1984.
- The record number of seven astronauts carried in a spacecraft at any one time.



Courtesy: USIS

Floating it alone? Bruce McCandless became the first 'human satellite' when he floated into space, 280 km above earth, untethered from the Challenger.

although the physiological changes became manifest after the astronauts' return to earth. After two weeks back on the ground, it was observed that the body systems returned to normal. Space scientists were interested to find out how long man could be exposed to weightlessness in space and yet recover fully on return to ground.

Although Soviet cosmonauts hold the long-duration space endurance record at present, the Americans led the way more than a decade ago with their *Skylab* mission. The unmanned orbital laboratory was launched in May 1973, followed 11 days later by a three-man crew which established a record stay of 28 days in space. By February 1974, the third and final *Skylab* crew had pushed the space endurance record to 84 days, which remains the longest any American astronaut has spent in space so far.

The Soviet Union was a slow starter. By the beginning of 1975, their own record stood at 29 days, the time two Soviet cosmonauts spent on board the orbiting space station *Salyut-4*. With the launching of the more advanced *Salyut-6* in September 1977, the space endurance record was pushed still further. By November 1978, it stood at 139 days. The Soviets continued to set new records; by 1982 the figure had been pushed up to 211 days, set up by a two-man crew on board *Salyut-7*. The latest record of 237 days was set up by a three-man crew comprising of Leonid Kizim, Vladimir Solovyov and Oleg Atkov who had been aloft on board *Salyut-7* since Feb 8, 1984.

During their long mission, the *Salyut* crew twice hosted visiting cosmonauts including India's Rakesh Sharma, who along with two Soviet cosmonauts, visited the station in April. In

July, the visiting crew included a woman, Svetlana Savitskaya, who became the first woman to walk in space. She spent three hours outside the space station testing a welding device. The *Salyut-7* crew members themselves made six space-walks totalling more than 22 hours and 50 minutes. They also carried out complicated assembly operations in space.

Apart from hosting visitors and going on space-walks, the *Salyut* crew carried out valuable scientific studies. The vast amount of information gathered from experiments conducted on board the space station will be invaluable for future long-duration missions especially in the setting up of giant permanent stations in space in future.

While the Soviets were pushing their endurance records, the US was busy developing the world's first reusable space shuttle. It was an entirely new concept in space travel. From a technological point of view, the shuttle is the first major breakthrough in manned space flight since Gagarin. Before the shuttle, all spacecraft had to be discarded after a single launch, which added enormously to their cost. The shuttle, on the other hand, is designed to be used again and again after refurbishment. In fact, a shuttle is designed to be reused more than a hundred times, which means a substantial reduction in the cost per flight.

In design, the shuttle is a true aerospace vehicle. It takes off like a rocket, goes into orbit like a spacecraft and lands like an aircraft. In spite of its design complexities, the shuttle cabin is quite similar to that of any modern jet liner. The crew work in their shirt-sleeves without cumbersome spacesuits, breathing normal air just as on earth.

Manned Missions—Landmarks

The first man to go into earth orbit in a spacecraft—Yuri Gagarin (USSR), Apr. 12, 1961.

The first woman to go into space—Valentina Tereshkova (USSR), Jun 16-19, 1963.

The first man to walk in space—Aleksei A. Leonov (USSR), Mar 18, 1965.

The first woman to walk in space—Svetlana Savitskaya (USSR), Jul 18, 1984.

The first man to walk "free" in space—Bruce McCandless (USA), Feb 7, 1984.

The first man to land on the moon—Neil

Armstrong (USA), Jul 21, 1969.

The longest stay in space—Leonid Kizim, Vladimir Soloviyov, Oleg Atkov on board *Salyut-7*, Feb 8-Oct 2, 1984.

The first flight of space shuttle—Apr 12, 1981, *Columbia*. Crew: John Young, Robert Crippen (USA).

The largest space crew in a single mission—Crew of *Challenger* on its sixth flight. Crew: Robert Crippen, Jon McBride, Paul Scully, David Leestama, Marc Garneau (Canada), Sally Ride, Kathryn Sullivan, Oct 5-13, 1984.

The first shuttle *Columbia* lifted off on its maiden flight on Apr 12, 1981, carrying a crew of two. It has since been to space five times more. Two more shuttle crafts, *Challenger* and *Discovery*, have since been added to the fleet. After more than a dozen successful flights and some dazzling feats including the daring rescue of a crippled satellite in space, the space shuttle has proved its versatility as a space workhorse. The sixth flight of *Challenger* in October was remarkable in that it carried the largest crew ever in a single space

mission. The flight, which took off on Oct 5, carried a crew of seven—five men and two women. During the mission, Kathryn Sullivan, one of the crew members, became the first American woman to walk in space. A notable achievement of the mission, according to mission specialists, "was the fact that although seven people were crammed into an area the size of a small studio apartment, they made it through eight days without any noticeable clashes or even displays of temper".

ASTRONOMY

Astronomy is the science of the study of the sky. It is one of the most ancient of the sciences dating back to prehistoric times, when our ancestors gazed up at the stars and formed them into fanciful constellations. But the real developments in the subject began with the Greeks, who drew up excellent star catalogues, measured the size of the earth, and studied the movements of the sun, moon and the planets. Most of them, however, believed that the earth was the centre of the whole universe.

Indian interest in astronomy dates back to prehistoric times and references to the motion of astronomical bodies such as the sun, moon and the planets are found in the *Rig Veda* (1500 B.C.). The first important astronomical treatise in India, the *Suryasiddhanta*, came out in 400 A.D. It dealt with varied aspects like measurement of time, motion of the sun, eclipses, planetary motions and also some astronomical instruments. The text has been continuously revised and updated by subsequent astronomers.

Modern astronomy began with the invention of the telescope in the early 17th century. In 1609, the Italian astronomer Galileo, using the telescope, made a series of spectacular discoveries. He observed for the first time the satellites of Jupiter, the phases of Venus and the countless stars in the Milky Way. With the development of more powerful telescopes, progress in astronomy became rapid.

Late in 1931, Karl Jansky, a radio engineer in the US, was studying static radio noise using a specially built antenna, when he noticed a steady stream of radio waves coming in from outer space. Having observed them for a year Jansky was sure that the radio waves were coming from the direction of the centre of the Milky Way. Later observations using improved radio telescopes proved him right. Jansky had opened up a new chapter in astronomy—that of radio astronomy.

With refinements in technique, radio astro-



Forty-two years of cold storage! That's the fate of life (if any) in Uranus which has the longest winter in the solar system. Each one of its poles points away from the sun for 42 years and the planet orbits the sun every 84 years. Uranus is itself circled by faint rings and it spins once every 11 hours.

nomny has in the past few decades led to the discovery of unique astronomical objects such as quasars, pulsars, interstellar gas clouds and many other surprises. In recent years, the use of special detectors carried by rockets and satellites have led to the discovery of astronomical objects which emit X-rays, gamma rays and infra-red rays. They have opened up another new discipline of space astronomy. From the knowledge thus gained, an entirely new image of the universe has emerged. It is now known that the universe is much more exciting and explosive than astronomers once thought.

Scientists have long debated the question: How did the universe come into being? Two possibilities have been suggested: (1) The universe was created out of an enormous explosion, thousands of millions of years ago; and (2) it has always been in the process of creation, without any beginning or end. Exponents of the first idea, called the 'big bang theory', believe that all matter in the universe once formed a compact mass, something like an enormous primordial 'atom'. This mass then exploded, forming a vast fireball. Then, in a few minutes, perhaps, matter was scattered across immense stretches of space which ultimately formed stars, galaxies and planets.

The proponents of the continuous-creation, or 'steady-state', theory, on the other hand, say that the universe has always been much the same and that matter is constantly being created. But they do not specify how matter is created from nothing.

In recent years, ample experimental evidence has been collected in support of the big-bang theory including what astronomers call 'microwave background radiation'. Theoretical calculations had earlier predicted existence of such radiation on the basis of the big-bang theory. The source of such radiation, coming evenly from all over space, cannot be explained on the basis of the steady-state theory. For their discovery of the microwave background radiation in 1965, physicists Arno Penzias and Robert Wilson shared the 1978 Nobel Prize in Physics.

Life Of A Star -

Although it may sound strange, stars are like us mortals. They are born, they grow old, they ultimately die. Of course, their lifespan is enormous: of the order of billions of years.

Astronomers now know that stars are born out of gas and dust that abound the interstellar space. The process starts with the contraction of dust cloud due to 'gravitation'. As condensation progresses, individual atoms are drawn towards the centre by force of gravity which also heats them up. After this process has continued for some millions of years, the heating becomes so much that temperatures of the order of 10m degrees or more are reached. At this temperature, the hydrogen in the cloud ignites starting a chain of thermonuclear reactions (similar to those occurring in an hydrogen bomb). And a star is born. The newborn star continues to shine steadily for hundreds of millions of years till the hydrogen fuel in its core is exhausted. After that happens, depending on the mass of the star, the life of a star follows different courses. Stars which have mass upto 1.4 times the mass of the sun gradually contract and grow fainter and denser. For a brief period (100m years or so), such a star may become a 'red giant' increasing enormously in size. But after this stage is passed, the star rapidly shrinks and becomes a 'white dwarf', a small, dense object that gives off little light.

If the mass of the star is more than 1.4 times the mass of the sun, the events follow a different course. Initially, the reactions take place as above but more quickly and the core temperature becomes as high as 3,000m degrees Celsius. At this stage the star explodes with tremendous force and a brilliant flash. During the explosion, a huge cloud of material is thrown out into space



A star is born! But die it must. A red giant is a star nearing the end of its life. Steadily puffing off its outer layers, the star drifts off into outer space, looking like a huge smoke ring. Such a ring is called a planetary nebula. Picture shows the Ring Nebula in the constellation Lyra.

which ultimately becomes interstellar dust. What remains of the original star becomes a neutron star or pulsar. If the original star is very massive, the end product is a 'black hole', a super-dense object with such a strong gravitational pull that even light cannot escape from its surface.

The Solar System

The sun and the nine planets make up the solar system. The sun is an average-sized star—one of the several thousand million in our galaxy. The present age of the sun is estimated to be around 5,000m years; scientists believe it will continue to shine in its present form for at least 5,000m years more before becoming a red giant. The diameter of the sun is about 1,400,000 km, almost 109 times that of earth. Its surface temperature is about 5,500°C.

The planets are the largest bodies in the solar system. In the order of their distance from the sun, the planets are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto. In size, the earth lies almost midway—it is much smaller than Jupiter, Saturn, Uranus and Neptune, but larger than Mercury, Venus, Mars and Pluto. Each planet travels around the sun in a giant ellipse, which is very nearly a circle.

Except Mercury and Venus, all the planets have one or more satellites. Saturn has the largest number of them, 19, followed by Jupiter, 16. Uranus has five satellites, Neptune four, Mars two. The earth and Pluto have one satellite each. Besides satellites, Saturn, Jupiter and Uranus also have ring systems, the most extensive of them being that of Saturn.

Besides the planets and their satellites, the solar system also contains a large number of large and small rock fragments known as asteroids

which circle the sun between Mars and Jupiter.

Astronomical Terms

Aphelion: The position in the orbit of a planet or a comet when farthest from the sun. The earth is at aphelion in early July, when its distance from the sun is 151.2m km. In early January, when the earth comes nearest to the sun, the distance is only 146.4m km.

Asteroids: Also known as the *Minor Planets*, asteroids are a group of small rocky objects that orbit the sun between Mars and Jupiter. So far, the orbits of about 2,000 individual asteroids have been computed by astronomers. The total number is estimated at more than 40,000.

Astronomical Unit: The basic unit of distance within the solar system. It is taken as the average distance between the earth and sun. The latest value for the unit is 149m km.

Astrophotography: A telescope designed specifically for astronomical photography.

Black Hole: The ultimate stage in the life of a massive star which is so dense that even light or any other form of radiation cannot escape from its gravitational field.

Chromosphere: The part of the sun's atmosphere that lies above its bright surface or photosphere, and below the outer corona. It is visible to the naked eye only during a total solar eclipse when it appears as a reddish rim around the disc of the eclipsed sun.

Conjunction: An event when a planet and the sun both are situated on the same side of the earth and almost lined up. When a planet is in conjunction, it is not visible because in the sky, it appears only during the day and lies close to the sun.

Corona: The outermost part of the sun's atmosphere. It is made up of very thin gas at a very high temperature. It is visible to the naked eye only during a total solar eclipse.

Cosmic Rays: Electrically-charged particles that continuously bombard the earth from outer space. They are made up of a mixture of protons, helium nuclei, nuclei of heavier elements and electrons.

Earthshine: The light reflected by the sunlit side of the earth. It makes the dark side of a crescent moon appear dimly lit.

Ecliptic: The imaginary apparent yearly path of the sun in the sky. The ecliptic is inclined to the earth's equator at an angle of 23.5°.

Equinoxes: Imaginary points in the sky which the sun crosses twice each year when moving from south to north or vice versa. When the sun is on any of these points, the day and night are of equal length at all places on the globe.

Galaxies: Huge conglomerations of stars, often containing many thousands of millions of them, together with gas and dust. More than 1,000 galaxies have been photographed with powerful optical telescopes, but only three are visible to the naked eye: the *Andromeda* which is visible in the northern sky and the two *Magellanic* clouds visible in the southern sky. The sun and the solar system is also part of a large galaxy, the Milky Way.

Inferior Conjunction: When Mercury and Venus lie almost between the earth and sun, they are said to be at inferior conjunction.

Inferior Planets: Mercury and Venus, which have orbits inside that of the earth, are known as the inferior planets.

Interstellar Matter: Materials, both solid and gaseous, which have been detected in the

space between stars in a galaxy. It consists largely of hydrogen together with minute solid 'dust' particles. In recent years, several organic molecules have been detected in interstellar space.

Light-year: A unit distance used in astronomy. It is the distance travelled by a beam of light in one year and is equal to 9.46 mmm/km.

Kepler's Laws of Planetary Motion: Laws laid down by Johannes Kepler between 1609 and 1618. They are: (1) The planets move in elliptical orbits, with the sun occupying one focus. (2) The radius vector, or imaginary line joining the centre of the planet to the centre of the sun, sweeps out equal areas in equal times. (3) The square of the time it takes for a planet to complete one orbit around the sun is proportional to the cube of its mean distance from the sun.

Magnetosphere: The region of the magnetic field of a planet or other body. In the solar system, only Earth, Jupiter, Mercury and Saturn are known to have detectable magnetospheres.

Meteors: Small particles, often smaller than a sandgrain, which become visible when they enter the upper atmosphere and burn up.

Meteorites: Larger objects which reach the earth's surface without being destroyed in the upper atmosphere.

Moon Illusion: When the moon is rising or setting, i.e., is low down over the horizon, it appears larger than when it is high up in the sky. This is pure illusion as can be proved by taking photographs of the moon at both positions and comparing them.

Neutron Star: The remnant of a very massive star which has exploded as a *supernova*. Neutron stars send out rapidly-varying radio emissions and are also known as *pulsars*.

Occultation: The covering up of one celestial body by another.

Opposition: The position of a planet when it lies exactly opposite to the sun in the sky. In this position, the planet is seen highest in the sky at midnight.

Perihelion: The position in orbit of a planet when it is nearest to the sun.

Saros: A period of time, 18 years 11.3 days, after which the earth, moon and sun return to almost the same relative positions. The saros may be used to predict eclipses.

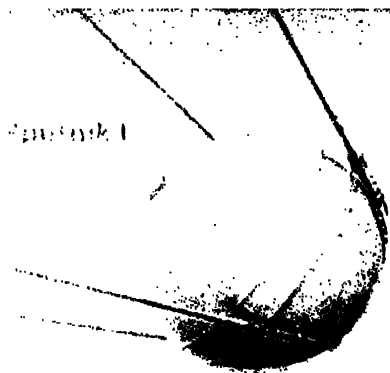
White Dwarf: The final stage in the life of a medium-sized star. It is a very small, dense star.

ENERGY

Energy Perspectives

Man has been dependent on energy in one form or another since the dawn of civilisation. The story of energy starts with wood which the primitive man used when he learnt to make fire using flint stones. Later, wood came to be replaced by coal and coal by oil only partially. In recent years, fast depletion of fossil fuels (coal and oil) and large-scale destruction of forests for fuelwood in the developing countries, have posed serious challenges for the planners and scientists to search for alternative sources of energy.

The first major blow to the world energy scene came in 1973 when an unprecedented hike in the price of petroleum crude was invoked by the oil-producing countries. The worst affected were the developing, oil-importing countries like India. In



Stepping into space: Sputnik 1, an orbiting transmitter, was the first vehicle to be launched in space. The USSR did it on Oct 4, 1957. A month later Sputnik II carried the dog Laika into space.

1981-82, nearly 80% of India's total export earnings, about Rs 52,000m, had to be spent for oil imports. More than that, however, was the problem of supplying domestic fuel to 80% of India's population which lived in villages. Indiscriminate felling of trees for fuelwood was creating havoc with our forests. There was an urgent need to discover and develop new sources of energy, especially renewable systems.

The problem was not limited to India; it was a worldwide problem and needed international action. A major step in this direction was taken in August, 1981 with the UN Conference on New and Renewable Energy held in Nairobi from Aug 11-21. The conference discussed 14 new and renewable sources of energy—solar, geothermal, wind, hydel, biomass, fuelwood and charcoal, oil shale and tar sands, ocean energy, peat and drought animals. Some of these were technically too sophisticated and many were not applicable to all developing countries. But the Nairobi conference gave a concrete direction in the development of the new and renewable energy resources.

To popularise the new sources of energy in India, a new department of Non-conventional Energy Sources was created under the Ministry of Energy in September 1982. Since then, there has been rapid expansion in the scale and range of activities for the development and utilisation of renewable sources of energy in India. Today, there are more than 75 manufacturers engaged in the development and manufacture of various renewable energy systems and devices. Among the areas which received special attention of the new department were solar energy, biogas, geothermal energy, biomass, tidal power and wind power.

Renewable Energy Sources

Solar energy has been used for drying grains for ages. It is estimated that the total energy from the sun falling on the earth is about 170m kw. But most of it falls on the oceans and other inaccessible places where it cannot be put to any use. Even where it falls on land, solar energy is highly diffused and needs some sort of collecting or concentrating device before it can be put to use. In recent years, several methods and devices have been developed to convert solar energy into heat and electricity.

Solar energy may be collected and used in two main ways: directly, or through biomass, that is,

by allowing plants to capture sunlight through photosynthesis, and then burning or otherwise using plant products. It may be directly used as heat or as electricity with photovoltaic cells. Use as biomass includes firewood and charcoal, agricultural wastes such as bagasse and rice husk, and biogas.

One of the most important decisions taken by the Department of Non-conventional Sources of Energy, recently, was to set up solar-water heating system in all government-run hotels and hospitals. Several public sector industries have also gone in for solar heating which is economical in the long run.

High priority has also been given to solar pumps which operate by electricity generated from sunlight using solar cells. At present, the cost of solar cells is too high to be useful for general application. But their use has been found economical in remote areas where no other means of power generation is available. To bring down the cost, a co-ordinated project has been taken up by the department to develop cheaper solar cells.

Biogas is one of the most important components of renewable energy supplies. One of its greatest merits is its versatility. It can be used for cooking, lighting, or for generation of power and for all the various uses electricity can be put to. The residue remaining after biogas production is a valuable fertiliser. Despite its many advantages, however, several problems such as high cost, complicated design and maintenance problems still remain. The number of biogas plants now in use in India is about 75,000.

India has very limited resources of geo-thermal and tidal power. Geothermal energy comes from the Earth's interior heat and can be tapped in areas where there are hot springs. So far, only two experimental projects,—one at Parbati Valley in Himachal Pradesh and the other in the Puga Valley in Kashmir—have been taken up for detailed assessment of their geothermal potential. Tidal-power studies have been taken up in the Gulfs of Kutch and Cambay on the west coast and in the Sunderbans area in the east coast. But the potentials appear to be meagre.

Production Of Energy Using Nuclear Fusion

The vast amount of energy continuously emitted by the sun and other stars is produced by the conversion (or fusion) of light hydrogen nuclei into helium nuclei. The process is accompanied by a large amount of nuclear energy and this is called nuclear fusion. It usually takes place at temperatures of several million degrees which exist in the interior of stars. Scientists all over the world are engaged in imitating the process in the laboratory as energy production by nuclear fusion is much less hazardous than energy production by nuclear fission—a process in which a heavier nucleus undergoes fission and breaks up into

International Years

The year 1957-58, which marks the beginning of a significant study of the extremes of the solar cycle is called the International Geophysical Year (IGY). The sun-spot activity was observed to be at its maximum noted so far.

The year 1964-65 is known as the International Year of the Quiet Sun (IQS). In this year the interrelated phenomena of the sun, earth and space were studied during the period of the sun's low activity.

any problems of disposal of radioactive wastes and exposure of workers to harmful radiation.

Fusion research has been given high priority by the Indian Government in its Sixth Five-Year Plan. Research in the field is being carried out by the Plasma Physics Programme group at the Physical Research Laboratory, Ahmedabad. The programme aims at reproducing some of the nuclear reactions that take place in the interior of the sun at temperatures of 5-10m degrees. The machine, known in the scientific language as a tokamak, has been named 'ADITYA'. The project is estimated to be completed over the next three years.

Energy Definitions/Units

Anaerobic Digestion: The process by which certain bacteria break down organic wastes into methane and carbon dioxide. Gobar gas plants work by this process.

Biogas: A mixture of methane and carbon dioxide gases produced as a result of anaerobic digestion of animal and organic wastes in a biogas plant. It has a high fuel value and is clean.

1 British Thermal Unit (BTU): The quantity of heat necessary to raise the temperature of 1 lb of water by 1°F. 1 BTU = 1,055 Joules.

1 Calorie: The amount of energy which will raise the temperature of 1 gm of water by 1°Celsius. 1 Calorie = 4.18 Joules.

Efficiency: A measure of the ratio of the useful energy output to the total energy input. The efficiency of any heat engine depends on the temperature differential on which it works. It is governed by the Second Law of Thermodynamics.

Flat Plate Collector: The simplest and most widely used solar energy device for gathering solar heat. It consists of a blackened back-plate to absorb solar heat and coils of pipes with water or air to carry away the heat to a storage system.

Hydrocarbons: Compounds which contain only carbon and hydrogen. Petroleum, oil and all cooking gases are mostly hydrocarbons.

Hydropower: Electricity generated from the energy of falling or flowing water.

1 Joule: The work done when 1 kg is lifted vertically through a height of 1m against gravity at sea level.

1 Kilocalorie: Equivalent to 1,000 Calories.

Photovoltaic Cell: A device for converting sunlight directly into electricity.

Power: The rate of work done. It is measured normally in watts. A Megawatt is a million watts, a Gigawatt is 1,000m watts.

Pyrolysis: The process of decomposition of substances by heat in the absence of air. In many countries, municipal waste is converted into fuel gases by pyrolysis.

Solar Pond: A unique method of trapping solar heat in the water of a pond, the bottom surface of which has been painted black. The lower level of the pond is filled with brine and the upper level with saline water. The concentration gradient helps maintain a temperature difference between the bottom and upper layers which can be used to generate power.

Tonne of Coal Equivalent (tce): The amount of energy contained in a tonne of average coal, and is equal to approximately 30,000m Joules.

Tonnes of Oil Equivalent (toe): The amount of energy in 1 tonne of average crude oil. 1 toe = 1.4 tce (approximately).

COMPUTERS

A computer is essentially an apparatus which can perform a sequence of calculations without much human effort. Calculations which will take days to perform if done manually, can be done within a few minutes using modern computers. There are two main types of computers: Digital and Analog.

Digital Computers: These are used in commerce and industry for extensive arithmetical calculations which would otherwise require enormous clerical effort. Such computers carry out mathematical operations with the variables expressed in the computer as numbers, usually in the binary system (given below). These numbers are recorded in the computer electronically, as a series of temporary magnets, each magnetised in one of the two possible directions. The two magnetisation directions correspond to the two numbers of the binary system. The first electronic digital computer, known as the Electronic Numerical Integrator and Computer or ENIAC, was developed at the University of Pennsylvania in 1947 by J. Presper Eckert and John W. Mauchly. In modern digital computers, integrated circuits prearranged to duplicate mathematical processes perform the desired operations on the binary numbers.

Analog Computers: In these computers, instead of using numbers, variable physical quantities are used as the input, the input being proportional to the instantaneous values of these variable quantities. Current, voltage, resistance, capacitance etc are the variable quantities used. They use electrical circuits for the direct execution of mathematical operations, the typical operations including summation, differentiation and integration. These circuits are mainly used for solving a wide variety of complex engineering problems, like investigation of stresses in aircraft, ships and large engineering structures. They can also be used to simulate and set up models of complex installations and study the effect of various operational factors on the complex installations. They can, for example, be used to simulate the behaviour of an aircraft in response to the actions of crew members. Using analog computers, apparent equipment failures or other emergencies can be introduced for proper training of the crew. The first automatic analog computer designed to solve complex differential equations, was described in detail in 1876 by the English scientist William Thomson.

Binary Code: The number system, using the figures 0 to 9, that we use in our day-to-day work is called the decimal system. In computers, the binary code, employing only figures, 0 to 1 is employed. In this code, the numbers are represented as follows:

No. of the decimal system	Binary code
0	0
1	1
2	10
4	100
10	1010

Just as a number in the decimal system, like 3725 can be written as $3 \times 10^3 + 7 \times 10^2 + 2 \times 10^1 + 5 \times 10^0$ (position of 3) - 1 + 7 (position of 7) - 1 + 2 (position of 2) - 1 + 5 (position of 5) - 1

The position to be read from right to left (the position of 5, 2, 7, 3 is 1, 2, 3, 4 respectively);

the equivalent of a number, say 11010, in the binary code will be written as: $1 \times 2^{5-1} + 1 \times 2^{4-1} + 0 \times 2^{3-1} + 1 \times 2^{2-1} + 0 \times 2^{1-1} = 16 + 8 + 0 + 2 + 0 = 26$.

Hybrid Computers: These are computer systems which contain both analog and digital devices in such a way that the properties of each of these can be used to the greatest advantage. Digital and analog computers can be interconnected in such a way that data can be transferred between them. They are usually designed for specific tasks and are used mainly in scientific and technical fields.

Integrated Circuits (ICs): An integrated circuit consists of a number of thin film circuits, each representing an amplifier, oscillator or some other functional stage, interconnected and encapsulated in a small housing. Each of these circuits contains a number of components such as transistors, resistors and capacitors connected together with their interconnections, in film-like layers. Such thin film circuits are usually formed on a ceramic, glass or alumina base, a few thousandths of an inch thick. Vacuum deposited films at appropriate parts of this film circuit are used to obtain the desired resistance, capacitance, etc. Since these circuits do not include any handmade joints or connections, these ICs provide a very reliable service and have been very widely used to meet the requirements of armed forces and space scientists worldwide. They have also been used extensively in computers with large increases in operational efficiency.

Control Processor or Central Processing Unit: It is the nerve centre of a computer and is a highly complex electronic device. It supervises all activities within the computer and interprets the instructions given in the programme. The electronic circuits within it analyse the instructions

and determine the operation to be carried out and also the location(s) of the data on which the instruction is to be carried out.

Microprocessor: The main IC in the computer. It consists of a single silicon chip, a few millimetres in area or a small number of chips, that directs the computer's activities. One tiny microprocessor has the same computing power which a computer containing a large number of vacuum tubes had in the 1950s. Today's chips are vastly smaller and cheaper than the vacuum tubes they have replaced.

Chip: A small piece of silicon containing thousands of built-in electronic components.

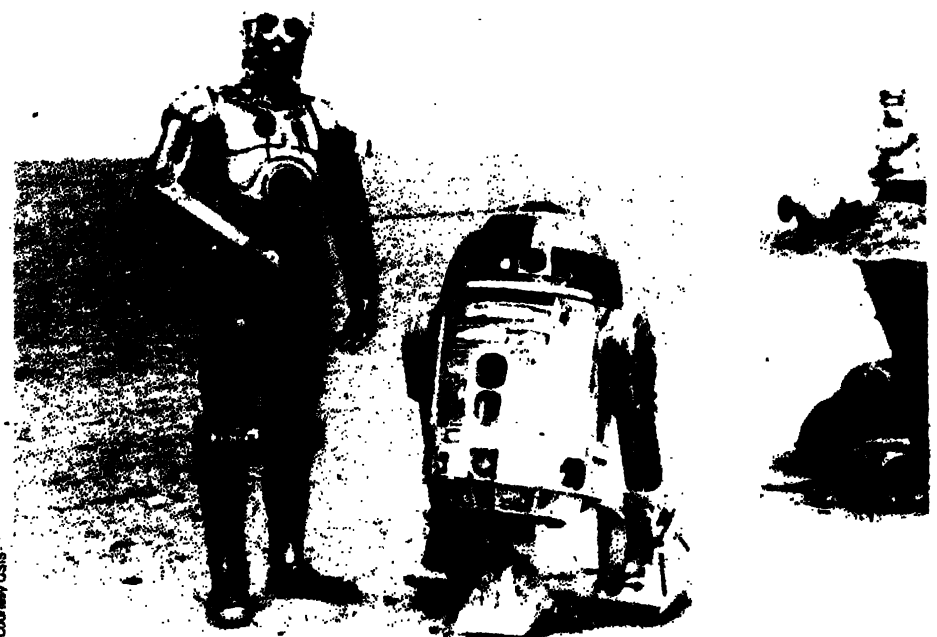
Data Processing: It is the rapid conversion of a large amount of information in unorganised form which can be stored and analysed by office machines and computers. It is accomplished by data-processing systems which sort out and organise the information applying several mathematical and statistical operations. It has wide applications and has been used extensively for various purposes, notable amongst these being the census and election tabulation, business cost estimates, physical and social science research and guidance of vehicles through interplanetary space. The mass of information collected during space missions is processed on earth using modern electronic computers for obtaining useful information.

Programming Languages: Computer programmes, called the software, are the means of communication between the computer and the user. Computer programmes are written in the following main languages:

FORTRAN or Formula Translation, is the language most used in problems related to scientific work and engineering applications. It is particularly useful for complex numerical calculations and solving engineering analysis problems.

COBOL or Common Business Oriented Language, a computer language used mainly for business work, is essentially used in commercial data processing.

Computerised marvel : The two endearing robots R2 and D2 in 'Star Wars'.



Courtesy USIS



Courtesy German Features

Siemens Computers : Installed at the Esro operations centre in Darmstadt, FRG. Computers ensure that more use is made of satellite data than merely relaying the pictures of cloud covers.

BASIC or Beginners All-Purpose Symbolic Instruction Code, is a computer language essentially developed for teaching the use of remote-

control, time-sharing systems. It is perhaps the simplest of all languages and can be learnt by an average mathematician within a few hours and mastered within a few days.

PL/1 or Program Language, is a multipurpose programming language which can be used for solving business as well as scientific problems. It includes the advantages of both FORTRAN and COBOL.

ALGOL or Algebraic Oriented Language or Algorithm Language is mainly used in programming of scientific problems and is more comprehensive than FORTRAN. It is more flexible than FORTRAN and is easier to model. It evolved as a result of international cooperation to obtain a standardised algorithm language.

BIT is the basic unit of information in computing and is an abbreviation of the binary digit. It represents either of the binary digits 0 or 1.

BYTE is the term used for the number of bits used to represent a single letter, number or some other character. In most computers, a byte consists of eight bits.

WORD is the basic unit in which information is stored and manipulated in a computer. Each word normally consists of a fixed number of bits, the number of which may vary from computer to computer. A word may represent an instruction to the computer or some data. A **word processor** is used for creation, storage or retrieval of the written word by the typewriter terminals which use the magnetic type for storage, automatic control, editing and retyping of words.

WHAT'S IN A NAME?

Names of scientists have been associated with different physical quantities since early times to acknowledge the important contributions they have made in their respective fields. Given below is a list of the names of scientists and the units of physical quantities named after them:

Name of the scientist	Physical quantity
Ampere	current
Angstrom	length
Celsius	temperature
Coulomb	charge
Curie	(radio) activity
Fermi	length
Farad	capacitance
Gauss	magnetic induction
Henry	inductance
Joule	energy, work
Maxwell	magnetic flux
Newton	force
Ohm	resistance
Volt	electrical potential
Watt	power

anywhere in the world if the ship is fitted with satellite communication terminals. The INMARSAT has a membership of 40 countries.

The fundamental frequency of male voice (nearly 142 Hz) is less than the fundamental frequency of female voice (nearly 260 Hz). That is why, the female voice is shriller as compared to the male voice. The difference is due to the different lengths of vocal tracts in males and females. In men, this length is 17-20 cm whereas in women it is 15-17 cm.

Long Distance Communication Methods

A large number of messages are transmitted every second over distances extremely large as well as not so large. The following major electrical techniques are used for transmission of these signals.

Coaxial-cable System: A coaxial-cable consists of a copper tube, nearly three-eighths of an inch in diameter with a single copper-wire conductor in the middle; the cables are generally grouped in numbers, varying from 8 to 20. They are used to carry radio waves in the frequency range 500 kilocycles to 20 megacycles, corresponding to wavelengths in the range 600—15 m; this frequency range is normally used for AM radio transmission.

Microwave-radio Relay Systems: For this, microwave-radio relay towers, usually spaced 30 to 50 km apart are used. Electromagnetic radiations in the frequency band between 10^9 cycles to 10^{10} cycles are used in this method.

Wave Guide System: In this long distance transmission technique, a single hollow tube

TRANSMISSION

Amplitude Modulation (AM) & Frequency Modulation (FM) Transmission

For long distance communication, as well as for radio and TV broadcasting the audio signals are superimposed on high frequency radio signals and then transmitted, this process being called modulation. In amplitude modulation (AM), the amplitude of the high-frequency radio wave, called the carrier wave, is varied in accordance with the variations in the amplitude of the audio signals to be transmitted. This method of transmission (and reception) is most widely used and in India was the only method till only a few years ago, when frequency-modulation was employed, first at AIR, Madras. The AM reception is generally affected by noise generated by electrical equipment and neighbouring frequencies.

In frequency modulated (FM) transmission, the amplitude of the carrier wave is kept constant while its frequency is varied in accordance with the frequency of the audio signal to be transmitted. The FM transmission is carried out at high frequencies (see chart) and is not affected much by neighbouring frequencies and other electrical disturbances. It is generally used for stereo music transmission where quality of reception is of great importance. It, however, requires more elaborate equipment for reception as well as transmission. In India, FM transmission is done only at some of the metropolitan cities including Madras, Delhi and Bombay.

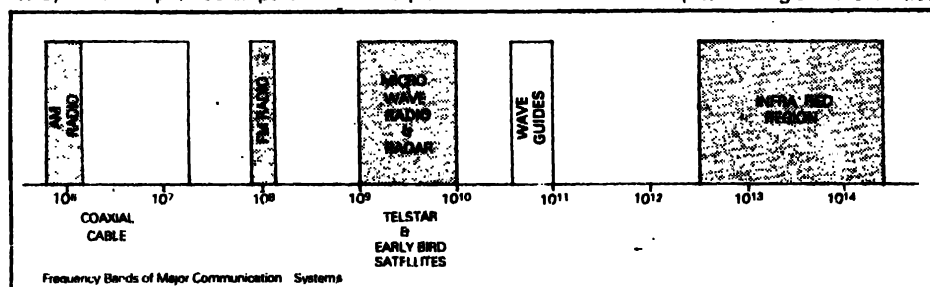
All About An Antenna

An antenna is a system of conductors used at radio/TV installations to radiate or receive radio waves. In order to be an effective radiator of energy, the dimensions of the antenna should be comparable with the wavelength of the waves to

be transmitted. Thus, antennas for medium and long wave transmitters should be very large, usually hundreds of feet in length. Antennas for VHF (very high frequency) and UHF (ultra high frequency) can be much smaller; however, to give an adequate service area, they have to be mounted on the top of a tower, a hill or a high building. The receiving antennas, can be small, for even if the signal picked up is low, it can be amplified in the receiver circuit.

Instantaneous Communication Link With Ships

India is a member of the International Maritime Satellite Organisation (INMARSAT) which has been established to provide instantaneous communication link with ships anywhere in the sea. A system of three geostationary satellites has been positioned over the Pacific, Atlantic and Indian oceans for this purpose. The satellite system will provide a continuous and more reliable link with the earth-stations; the high frequency radio link used so far has several drawbacks due to congested frequency bands, limited coverage and its dependence on the ionosphere. The three-satellite system can provide ships a link with a place



used for transmission of information by the range of 30×10^6 to 30×10^9 cycles per second, having wavelengths in the range of a few millimetres. This system is capable of handling more communication traffic than the other systems.

Communication Using Artificial Earth Satellites

The latest long-distance communication technique makes use of artificial earth-satellites. Communication via satellite was first achieved between Europe and the US using Bell system's TELSTAR satellite. Today, it is achieved commercially using Communication Satellite Corporation's Early Bird satellite, among others.

Multiplexing is the simultaneous transmission of many different messages over the same pathway. The main aim of using this process is economy. A broad-band signal containing many narrow-band signals can be transmitted at a

single main channel cables to transmit individual narrow-band signals.

Modulation and Demodulation: The information carried in the human voice (frequencies) can be transmitted to the radiofrequency electromagnetic waves and thus made to travel at their enormous speed of 300 million metre/sec, making long distance communication feasible. This process of transfer of a signal from one frequency band to another is called modulation. Frequencies of the human voice, which usually lie in the range of 200-4000 cycles per second (cps) are superimposed on the radiofrequencies in the megacycle range or microwaves in the range of billion cps. Demodulation is the process of separation of the single modulated signal into its component parts and using the audio signals to drive the speakers, etc. The large number of multiplexed signals in a broad-band can be separated into individual narrow band signals using this process.

PHOTOGRAPHY

The making of a photograph

When light falls on the photographic film, which has silver halide as its active component, nuclei of metallic silver are formed on the film the optical density of which on the film is proportional to the light intensity falling on it. When the film is developed, a visible image is produced due to intensification of metallic silver. The process of fixing the film, leaving it in a solution of sodium thiosulfate (hypo), removes the portion of the film on which no light falls. The process results in the production of a negative in which the dark parts of the picture taken appear light and the light parts appear dark.

A positive print can be obtained from the negative by placing it in contact with photographic paper coated with a layer of silver halide, illuminating it and repeating the process of developing and fixing.

In **colour photography**, the image is recorded in three separate emulsions which are sensitive to the three primary colours, red, green and blue; all other colours in the object to be photographed are registered as combinations of all or some of these primary colours. The negative films obtained are also coloured.

The f-number of a lens (or system) is defined as the ratio of the focal length of the lens to its aperture diameter. Thus, a camera with an f-number $f/2$ has an aperture having a diameter one-half of its focal length. The smaller the f-number of a camera lens, the larger will be its aperture diameter (and hence its light collecting area) compared to its focal length, and hence the sharper the image obtained.

Telephoto Lens is a camera lens, which usually consists of a combination of a convex and a concave lens and is used for taking close-up photographs of objects from a distance. Its effective focal length is quite large as compared to ordinary camera lenses.

Infrared false colour photography is a relatively new photographic process which has important applications in the field of aerial reconnaissance, medicine and several other disciplines. The process uses a film having three layers sensitised to green, red and infrared radiation.

Modern Developments

Light Emitting Diodes (LEDs) are widely used

as indicator lamps in electronic equipments, e.g., in pocket calculators. It is a simple pn junction which emits visible light when voltage is applied in a particular direction across it. Using LEDs, one can obtain light of any colour between red and green but their efficiency is maximum for red.

Liquid Crystal Display (LCD) is a display system in which a thin layer of a liquid is sandwiched between two conducting glass plates between which a desired voltage can be applied. By the application of the voltage to certain specific leads in the conducting area, specified areas of the display can be illuminated. A seven-segment pattern of such displays can be used to give a numerical display. LCDs consume much less electrical power compared to LED displays and have superseded them in battery operated calculators and digital watches.

Magnetic Resonance (NMR)

The CAT (Computerised Axial Tomograph) scan introduced in the field of medicine was a revolutionary diagnostic tool, which has still not reached the masses due to its exorbitant cost. The technique, however, is likely to be surpassed, by the NMR tomography, a new kind of imaging technique used in medicine as a powerful diagnostic tool. In this technique, the patient is to be examined for any internal disorders in a strong magnetic field. Radiowaves of selected frequencies incident at the parts of the body excite the hydrogen atoms in the body, which is induced to return these signals. The signals returned by the body are converted into medical images and superimposed to form a complete picture of the part to be examined, using computers. Better image quality in shorter measuring time is possible using this technique.

Electrophotography: This is a process widely used these days in office copying machines. In this process, charges are sprayed on a zinc oxide or selenium layer by a corona wire charged to several thousand volts. When the object to be photographed is exposed, the charges leak off through the photo conductive layer, image-wise. The photograph is obtained by developing this exposed image by applying an oppositely charged powder which sticks to the charged area. Xerography is adaptation of this process.

MIC

One of the worst environmental disasters of the world, leaking gas from a pesticide plant in Bhopal killed more than 2,500 people on the night of Dec 2, 1984. Most of the victims were residents of a shanty colony that had come up near the Union Carbide plant and they died before any medical help could reach them. Initial reports say the leaking gas was methyl isocyanate, or MIC in short, which was used by Union Carbide for the manufacture of a pesticide called Sevin. It is reported that more than 40 tonnes of the poisonous chemical which was stored as liquid in underground tanks, escaped into air and spread into the nearby areas. People, most of whom were caught in their sleep, had little chance of escaping as atmospheric conditions on that night kept the gas cloud almost hugging the ground. Many died while trying to run away, others succumbed in the city's overcrowded hospitals. The worst part of the tragedy was that even doctors did not know how to treat MIC-poisoned victims, for never before had there been such a massive leakage of the chemical anywhere. There were no known antidotes against it.

What is MIC?

Chemically, methyl isocyanate is only of a large group of substances known as isocyanates which are widely used as an industrial raw material. They are so called because they contain the isocyanate, or $-N=C=O$, group. All isocyanates are poisonous, but methyl isocyanate is particularly so as it can easily turn into a gas and spread. Aromatic isocyanates such as phenyl isocyanate is widely used for the manufacture of polyurethanes, commonly known as 'foam rubber'.

There are several routes by which methyl isocyanate can be manufactured. One reaction, for example, uses dimethyl sulphate and potassium cyanate both of which are relatively harmless substances. But a much cheaper method is to use the poisonous gas phosgene as one of the starting materials. In the Union Carbide plant too, phosgene was used as the starting material for the manufacture of MIC.

At ordinary temperatures, MIC is a colourless liquid which boils at round 40°C . But it is highly unstable and decomposes easily, particularly if there is moisture around. Normally, liquid MIC is stored in stainless tanks under high pressure nitrogen gas to prevent any reaction. Another advantage of storing it under pressure (one and a half times the normal atmospheric pressure) is that under those conditions it boils at a much higher temperature, almost 60° instead of normal 40° . And if the liquid is not brought to boiling temperature, there is no way in which MIC can escape as a gas. So one thing is certain about the Bhopal gas leak, that the stored liquid MIC was somehow brought to its boiling temperature on the fateful night before it leaked out.

How did it happen?

While investigation is still on to find out what actually led to the leakage, from whatever is known it appears certain that it was the outcome of a combination of lapses, especially in respect of the safety provisions of the plant. For instance, it was pointed out as far back as 1982, by a visiting team of American experts from the West Virginia plant of the Union Carbide, that the instrumentation in the Bhopal plant was inade-



The battle with MIC and its aftermath.

quate. The team had reported that "the feed pipes and the safety valves were poor, with high potential for developing leaks." They further pointed out that the maintenance procedures at the plant were lax.

It is said prior to the massive leakage of MIC, there was a sudden rise in pressure in one of the underground storage tanks. While it is not known how there was the sudden build-up of pressure or what made the liquid violently boil away as gas, it was not caused by a rise in the ambient temperature. On that night the temperature recorded at Bhopal was only 14°C, hardly enough to cause the boiling. Scientists investigating the leakage are of the opinion that it could be due to entry of water in the tank or the presence of some foreign matter which could have started a polymerisation reaction raising the temperature to the liquid's boiling point. It is known that MIC reacts violently with water, even traces of it, with consequent rise in temperature.

But whatever actually happened, the plant was not equipped to handle such emergencies. Like its counterpart in the USA, the Bhopal plant did not have any computerised safety system. Worse than that, even the safety systems that were installed at Bhopal, for some reason, were not operative that night. For instance, it is alleged that one of the two gas scrubbers at the plant, which was meant to neutralise any leaking MIC with caustic soda solution, was under repair because the plant had not been manufacturing pesticide for some time. Another important safety feature, the flare tower is also said to have been inoperative. Normally, a pilot flame has always to be kept lighted on the flare tower to burn out any leaking gas that had escaped un-neutralised from the scrubber. MIC is known to be highly inflammable. Had the pilot flame been on that night, the tragedy could have been avoided. At worst there would have been a big fire in the plant.

Toxic effects of MIC

As said before, there is hardly any reported case of MIC poisoning in man in medical litera-

be given to the poisoning victims. But it was known that MIC vapour had a terribly irritating effect on mucous membranes, particularly in the respiratory tract. In the lungs, experts say, MIC breaks down into methyl amine and urea both of which are toxic substances. These substances damage the most important lining material of the lungs and make them incapable of purifying blood with atmospheric oxygen. Also, due to damage to the membranes, large quantities of fluid accumulate in the lungs making breathing almost impossible. The patients in most cases died of asphyxia.

MIC vapour is also known to irritate the eyes making them painful. Since the cornea of the eye is a sensitive membrane and since MIC is known to damage mucous membranes, it is possible that MIC may cause blindness. But nothing is known for certain and it is difficult to predict what the long term effects of MIC exposure would be on the eye.

Another serious condition caused by MIC that came to light after the Bhopal leak was the development of paresis—partial paralysis of the body. The cause of this condition is in all probability damage to the brain due to lack of oxygen supply. When the lungs are incapable of supplying oxygen to blood due to any reason, the brain cells die first as they are the most vulnerable.

'Operation Faith'

After the tragic event, a team of experts was deputed to the Union Carbide plant to suggest the most satisfactory method of neutralising and disposing of the remaining MIC stored in a tank in the plant. The team, led by the Director General of Scientific and Industrial Research, Dr S. Varadarajan, suggested 'neutralisation' of the chemical by converting it into pesticide. In fact, in the subsequent operation codenamed 'Operation Faith', what the scientists did was to restart the plant to manufacture the pesticide Sevin. Of course, adequate precautions were taken this time to prevent any leakage of MIC.

THE BODY BEAUTIFUL

An Inside Story

Not many of us know ourselves, our minds and most important our own human bodies and their strange complexities. Why then quarrel with the commercial doctor who makes a scapegoat of patients having no real understanding of their ailments—not even of the basics of human anatomy?

Science has been solving the enigma of the body machine for over 2000 years. But there exists a wide communication gap between the medical profession and the general public. Perhaps an inside look at our body constitution would help in narrowing this gap.

The body machine presents a bizarre panorama of multifarious organs, each serving a specific bodily function. All the organs starting from the cell—the creator—to the brain—the controller—are distinct and separate structures.

Cell—the creator

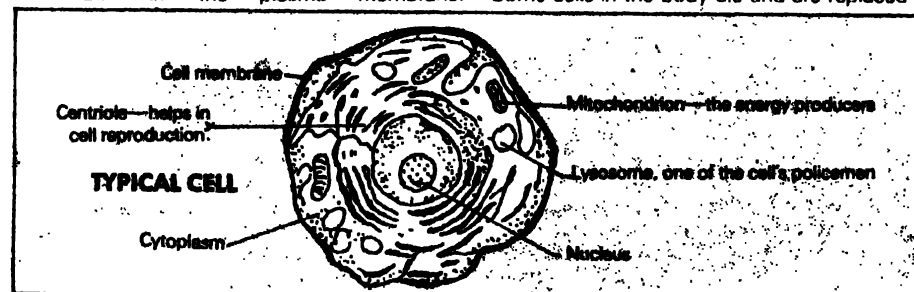
Each organ has developed from the life building materials called cell. The entire human body is a community of more than a million cells, all developed from just two cells, by the process of reproduction. This development occurs after the

egg cell within a woman's body has been fertilised by a sperm cell from a man, resulting in the division and sub-division of these cells to form a new human being—the baby.

Most of the human cells are about 0.01 mm in diameter—the largest cell visible to the naked eye being the ovum. Cells not only differ in size and function but each type of cell looks quite different from the other. Some are like round blocks of jelly and others like tiny coils, doughnuts, needles or even space satellites. Many cells are shapeless but most cells have the same structure. Each cell is housed inside a thin skin called the cell membrane or the plasma membrane.

Cytoplasm, a watery jelly inside the membrane supports the cell 'structures'—the busy bodies engaged in an amazing variety of activities. The nucleus at the centre of the cell is the 'brain' behind its activities. In it are tiny threads called chromosomes that carry genes. The genes shape the body constitution.

Cells also produce energy, transport nourishment and protect the body against diseases. Various cells combine to form the many tissues in the body like the bone, muscle or nerve, and these tissues, in turn, join together to form organs such as the heart, the lungs or the liver. Some cells in the body die and are replaced by



Cells by mitosis—a process by which a cell divides to form two identical 'daughter' cells, which later develop into full, independent cells.

Bones—the supporters

One look at the adult skeleton could give anyone the creeps—unless of course it's inside the cupboard! But the human skeleton made up of over 200 interlocked, hard bones constitute the entire body framework and supports all its vital organs. The skull itself is made up of 22 bones and almost 26 interlocking bones form the vertebral column. Others are joined together in a system of levers that help the body move when pulled by muscles.

In the earlier stages of life many bones are made up of a rubbery, tough substance called cartilage. In adults cartilage exists as pads covering the ends of bones, at the joints. These pads enable the smooth movement of bones. Ossification i.e. bone deposition in place of cartilage is incomplete during birth and several bones remain cartilaginous until at a time roughly between birth and adolescence. Thereby the stage of ossification can be a useful guide in identifying human remains.

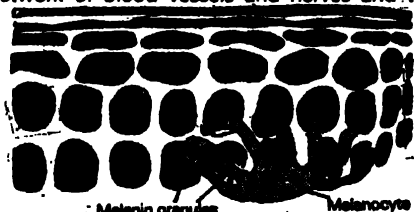
For a pound of flesh

Muscles, commonly known as flesh, are the most abundant tissues in the body, accounting for almost two-fifths of the body weight. No wonder the human anatomy has nearly 650 separate muscles—each being controlled by a nerve. Voluntary muscles, those that we use deliberately, are made up of a bundle of fibres. Involuntary muscles, over which we have no control like the lungs, consist not of fibres but of pointed cells.

When muscles are at work the force they exert is a pulling force. Even when we push an object, our muscles operate by pulling. All acting muscles use up energy from sugar in the blood. Frequent use of muscles make them strong.

Under the Skin

"Don't be thick skinned!" So they say. But what if nature itself has made the skin tough and thick enough to act as a protective shield around the body? As one of the vital organs of human anatomy, the skin protects us against injury and heals fast if damaged. The skin is also a waterproof jacket which prevents rapid absorption and evaporation at the surface of the body. Thus the water content in the body remains constant. The skin is also the most versatile organ of sensation. The two principal layers of the skin are the dermis, up to 3 mm in depth, composed of tough elastic tissues with a rich network of blood vessels and nerves and the



epidermis, protective outer layer of the skin without blood vessels. Hair roots are located in the dermis. The adipose (fatty) tissue beneath the dermis cushions and insulates the body. Some 2m sweat glands (leading to pores) in the skin help to get rid of waste liquids from the body and also to regulate body temperature.

Black may be beautiful, but the fair skin is most sought after; and skin colour varies in accordance with the presence of red



haemoglobin in blood, and the brown pigment melanin produced by cells called melanocytes.

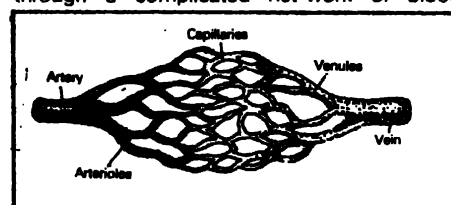
Quite often one comes across somebody's double. But no two persons ever have the same finger prints and finger prints never change even if the outer skin is damaged!

And for the Breath of life

Oxygen is vital for human existence. By the process of respiration air is drawn into the lungs through bronchial tubes and passes through a network of smaller tubes into tiny air sacs called alveoli. Here, oxygen from air separates to enter the bloodstream and carbon dioxide leaves the blood and enters the alveoli and is breathed out.

Have a Heart

Yes, 'one must. For it is the strong muscular heart that keeps life ticking. Tirelessly beating away at the rate of 70 times a minute, the heart pumps blood around the body, under pressure, through a complicated net-work of blood



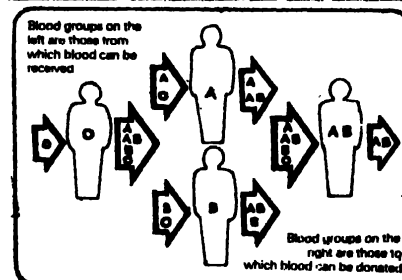
vessels. The blood vessels in each person's body measure thousands of miles. Arteries carry blood rich in food and oxygen from the heart to the various organs and the veins carry blood back to the heart. The arteries divide into smaller vessels called arterioles and the veins divide into venules. These blood vessels are linked, below, by tiny blood vessels called capillaries where rich blood from arterioles exchanges food and oxygen for waste materials from the body tissues. The blood then flows into the venules and back to the heart. The small capillary, above the arterioles and venules carry food and oxygen from the rich arterial blood which pass through its thin walls into the body's cells. In return, carbon dioxide and other waste materials enter the capillary and are carried away by blood to the heart.

Blood, the body's vital fluid, varies in quantity from person to person according to age and weight. However, an adult has about 5 litres of blood—roughly enough to fill seven wine bottles. The two chief blood cells are the red and white corpuscles. The former carry oxygen to the body's tissues and remove carbon dioxide, whereas the latter fight germs. The red substance in the red corpuscles called haemoglobin

are the oxygen carrying pigments. Shortage of the haemoglobin content in a person leads to anaemic conditions. Every person belongs to one of the four blood groups—A, B, AB or O—based on the presence or absence of substances called antigens (A and B) and antibodies (anti-A and anti-B). Antigen A and antibody anti-A react and cause dangerous clotting. The same is true of B and anti-B. Before blood transfusion the donor's blood is matched with that of the recipient.

BLOOD GROUPS

Group	Content
A	A and anti-B
B	Anti-A and anti-B
AB	A and B
O	B and anti-A



Eating and Drinking!

Some live to eat; and put the stomach on the job round the clock. But one should rather eat to live so that the cells that make up the various parts of the body have enough food supply. During digestion, food is broken down into substances that the blood can carry and the cells can absorb. Body chemicals called enzymes help the digestive process. Digestion takes place in the alimentary canal, a winding tube that begins at the mouth and ends at the rectum. In an adult this canal is about 9 m long.

The Controllers

Among the body's control systems are the glands and the nerves. The glands are like little factories manufacturing chemicals that they release into the body. The endocrine glands release chemicals called hormones, into the bloodstream, which control the body's day to day functioning. They also affect the shape, strength, growth and reproductive capacity of human beings. The exocrine glands release fluids directly viz. tear glands, salivary glands, mammary glands in women, liver, intestinal glands and urethral glands in men.

The liver is the largest gland in the body and plays an essential role in digestion. About 500 chemical processes take place in it and it regulates the quantity of food entering the bloodstream.

The Cleaners

The kidney is the body's internal cleaning agent though the work is shared by the lungs, the skin and the liver. Besides expelling the waste materials from the body in the form of fluid, the kidneys maintain a proper balance between water and salts in the body. Every human being has two kidneys. Patients can be kept alive without kidneys or with kidneys that do not work, by some form of dialysis where unwanted matter from the blood is filtered by a machine.

The Bundle of Nerves

Whether we like it or not all of us are a 'bundle of nerves'. The body's communication network is

kept in full swing by the nervous system. The brain and the spinal cord are together known as the central nervous system. The other nerves form the peripheral nervous system. The nerves are like telephone lines carrying information to the brain from the sense organs—the organs of sight, hearing, smell, taste and touch. The brain sends back instructions to the muscles and glands to take appropriate action. However, the beating of the heart is controlled by a system of nerves called the automatic nervous system over which there is no control.

The Sight and Sound show

Imagine living in a dark world of silence, without colour and without music. Sounds rather than Nature's gift of eyes and ears form the most invaluable part of the human body. Though the eyes collect information about the object it sees the actual 'seeing' takes place in the brain. And we need two eyes to see an object stereoscopically i.e. in depth. The cones of the retina—the cells that are sensitive to colour—respond only to bright light. Whereas in dim light, our vision depends on rods—the light sensitive cells of the retina—extremely sensitive even in little light. But they do not detect colour and the image they produce is not sharp. So we do not see colours in darkness.

Ears are not only organs of sound but they also help us to keep our balance. The sound impulses from the outer ear is picked up by the middle ear and transmitted to the brain along the auditory nerve—and we hear sound. A person with a broken eardrum can also hear as the sound passes, above, through the hole in the drum to a smaller eardrum.

The semicircular canals of the inner ear keep the human body in balance. They contain a fluid that moves when a person moves. Nerves carry information about the fluid's movement to the brain which, in return, instructs the body muscles to maintain a balance.

The Brain behind it all

The brain behind the complicated body machine, is, in fact more infinitely complicated than any computer or man-made machine. All life processes have their source in the brain—the control centre of all human organs, thoughts and emotions. But for the brain the progress of civilisation would have been sealed.

The brain is a soft pinkish-greyish mass, shaped like a large walnut. It consists mainly of millions of nerve cells, called neurons, and supporting cells called glial cells. Each of the neurons is made up of a cell body and fibres connected to other cell bodies or organs.

At the highest form of creation, man also has a

more highly developed brain than that of any other creature. A person's intelligence or capability is not related to the size of the brain, for a genius may have a smaller and lighter brain than a person of average intelligence or even a feeble-minded person.

Twenty-four centuries ago Hippocrates' brain signalled him to remark that a doctor must teach his patients to care for their own health. But modern brains in the field of medicine signal a different message. It is bad for patients to know too much, they say.

Whom would you vote for? Quick. It's time you knew your mind.

Diseases And Their Causes

Achondroplasia is a condition in which the long bones of the arms and legs (but not the bones of the rest of the body) do not grow to full size. The condition is inherited and its cause is not known.

Acromegaly is a chronic disease in which there is a gradual but conspicuous enlargement of the hands, feet and features of the face. It is caused by an excess release of growth hormone from the pituitary gland in adult life. It is often caused by a tumour in the brain.

Agnosia is a brain disorder in which a person cannot correctly interpret the information from his senses and understand what goes on around him. It may be caused by blocking of blood vessels to the brain by a blood clot or by a tumour.

Alactasia is a condition found naturally in some people that makes them unable to digest milk. It is caused by the lack, or deficiency, of an enzyme, lactase, found in the stomach which helps in the digestion of milk.

Apoplexy is another name for a stroke caused by a cerebral haemorrhage. The cause is mostly high blood pressure or hardening of the arteries.

Athlete's Foot is a chronic disorder of the skin between the toes which often leads to splitting of the skin, blisters and scaling between the toes. It is caused by a fungus which thrives in warm, wet places.

Botulism is a rare but extremely dangerous type of food poisoning caused by bacteria. The bacteria do not infect man but can grow in badly preserved food and contaminate the latter with poisonous substances which they release.

Byssinosis is a lung disease caused by breathing in the dust from cotton and cotton fabrics, over a long period. It is mostly found among textile workers.

Diplopia is another name for 'double vision'. The cause is often the paralysis of eye muscles.



It's not very often that a 32-day-old baby succeeds in creating history. But that's exactly what Baby Fae managed to achieve during her brief earthly stay. Born with "hypoplastic left heart syndrome", a lethal heart defect that afflicts one in 12,000 newborns, little Fae was selected for 'xenograft'—a transplant from one species to another. Since her own heart's left ventricle, i.e., the main pumping chamber, was not fully developed and could not provide adequate blood flow, a baboon's plum-sized heart was put in place of her own heart during an operation which lasted five hours—this, when the baby was only 12 days old. Baby Fae put up a valiant fight for survival for the next 20 days before her little body rebelled against the foreign tissue and rejected the new heart. Born Oct 14. Died Nov 15. A tiny temporary link between ape and man.

but it may also be caused by taking drugs or alcohol.

Folliculitis is the inflammation and the formation of pimples due to the infection of individual hair follicles by bacteria. It occurs on parts of the skin that are frequently shaved such as a man's face.

Gingivitis is the inflammation of the gums that begins around the teeth and causes bleeding. The cause is bacteria which grow on food particles lodged between the teeth and gums.

Glossitis is the inflammation of the tongue. It is caused by too much smoking, highly spiced food, vitamin deficiency or an infection in the mouth.

Grave's Disease is a type of goitre in which the patient's eyes protrude. The condition is also known as exophthalmic goitre.

Gynaecomastia is the enlargement of the male breasts. The cause is generally a hormone imbalance, but can be caused by certain drugs also.

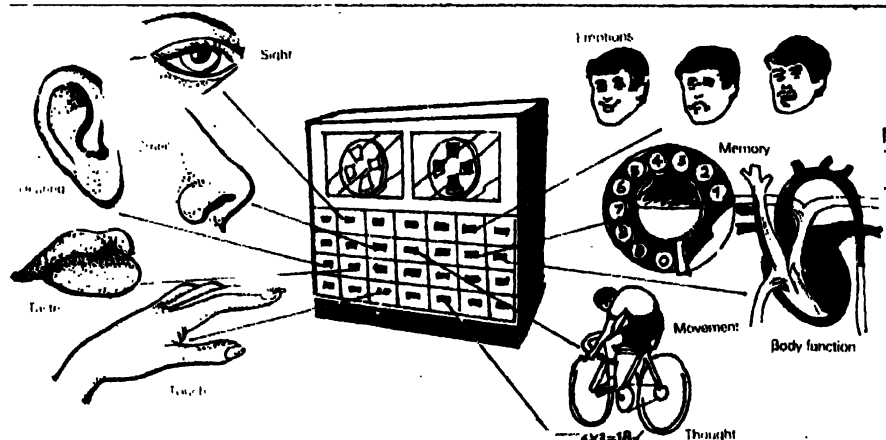
Haematuria is a condition in which blood is excreted with urine. It may be due to some disorder of the kidney such as a stone formation or tumour. It may also be a symptom of cancer of the bladder.

Haemophilia is an inherited disorder in which the blood clots very slowly. It is caused by the absence of a blood protein which is responsible for clotting of blood.

Halitosis is the medical term for bad breath. The cause is generally tooth decay or diseases of the gums, nose, lungs or sinuses.

Hemiplegia is a form of paralysis in which only one side of the body is affected.

Hepatitis is a medical term meaning inflammation of the liver. It is caused by a virus which



may spread by contamination of food or water supplies, or by way of contaminated blood through hospitalware.

Hodgkin's Disease is an uncommon disorder which affects the lymph nodes and spleen, and reduces the patient's resistance against infections. It may be regarded as an unusual form of cancer.

Hydrocephalus is a rare condition which is seen in newborn infants. The symptom is an abnormal enlargement of the head due to accumulation of fluid. The cause is often a brain tumour.

Hypertension is the medical term for high blood pressure. There may be several causes ranging from narrowed arteries, and diseased kidneys to tumours of the adrenal glands and brain disease.

Iatrogenic Disease is a disease 'caused' by medical treatment such as overuse of antibiotics or steroids.

Jaundice is not in itself a disease, but rather a physiological manifestation of a disorder. The cause may be blockage of the bile duct in the gall bladder, a liver infection such as hepatitis, or excessive breakdown of red blood cells.

Kwashiorkor is a most severe form of malnutrition in children. The cause is mainly protein deficiency.

Laryngitis is the inflammation of the voice box or larynx. The cause may be an infection, or an allergy from dust or smoke.

Leukaemia is a disease in which there is an abnormally large number of white blood cells (leucocytes) in the blood and blood forming tissue. It is usually regarded as a type of cancer.

Meningitis is inflammation of the membranes covering the brain and the spinal cord. It is caused by any one of the several species of bacteria.

Myasthenia Gravis is a chronic disease in which the muscles are weak and tire easily. The basic cause is not understood, but nerve impulses are not transmitted normally to the muscles because of a chemical abnormality.

Narcolepsy is a tendency to fall asleep at any time, anywhere, not due to normal tiredness. The usual cause is a damage to the brain due to an infection such as encephalitis, or a tumour, or from a head injury.

Neuralgia is pain along the course of a single nerve or group of nerves such as the sciatica. The cause may be an injury to the nerves or an

MILESTONES IN MEDICINE

1628: William Harvey, English physician, publishes his work on the circulation of blood through the body.

1683: Antony van Leeuwenhoek, Dutch microscopist, discovers bacteria.

1796: Edward Jenner, English country practitioner, carries out the first successful vaccination with cow-pox virus.

1815: Rene Laennec, French physician, invents the stethoscope. His device was a wooden tube which concentrated the sound of air flowing in and out of the lungs and transmitted it to the doctor's ear. The familiar rubber tubes leading from a chest-piece to each ear came into use towards the 19th century.

1847: Sir James Simpson, English obstetrician, uses chloroform as an anaesthetic. He used it to reduce the pain of childbirth.

1865: Louis Pasteur, French chemist, discovers the relationship between microbes and disease which later led to the development of microbiology.

1865: Joseph Lister, English surgeon, uses carbolic acid as the first successful antiseptic in surgery.

1868: Gerhard Hansen, Norwegian physician, discovers the leprosy bacillus.

1876: Robert Koch, German physician and pathologist, discovers the bacteria that causes cholera.

1895: William Roentgen, German physicist, discovers x-rays.

1898: Sir Ronald Ross, English physician working in India, discovers the malaria parasite.

1903: William Einthoven, Dutch physiologist, invents the electrocardiograph which records electrical impulses from the heart indicating whether it is in good health.

1921: Frederick Banting and Charles Best, Canadian medical researchers, use insulin isolated from animal pancreas for the treatment of diabetes.

1929: Alexander Fleming, English bacteriologist, discovers penicillin. It was used on human patients for the first time in 1941.

1943: Wilhelm J. Kolff, Dutch doctor, builds the first artificial kidney machine to purify the blood of patients with impaired kid-

ney function.

1949: Rustam Jal Vakil, Indian pharmacologist, isolates reserpine from the roots of the plant *Rauvolfia serpentina*, commonly known as Sarpagandha. Since 1953, after laboratory investigations in India, Switzerland and the US reserpine has been used for a wide range of purposes, mainly as a tranquiliser and in the treatment of high blood pressure.

1953: John Heynsham Gibbon, American surgeon, uses the heart-lung machine during an open-heart surgery.

1954: Jonas E. Salk, US physician, uses the first effective vaccine against polio. The injectable vaccine was prepared by killing the polio virus and then mixing it with a small amount of penicillin.

1956: Gregory Pincus, American physiologist, develops the first oral contraceptive based on a mixture of hormones.

1957: Albert Bruce Sabin, American virologist, develops an oral polio vaccine based on live but weakened polio virus.

1967: Christiaan Barnard, South African surgeon, performs the first surgical transplant of the human heart.

1978: Robert Edwards, British physiologist, and Patrick Steptoe, British gynaecologist, perform the first successful test-tube fertilisation of a human ovum and its reimplantation leading to the birth of the first test-tube baby.

1980: World Health Organisation declares total eradication of smallpox.

1982: Willem DeVries, American surgeon, carries out the first implant of a totally artificial heart made of aluminium and plastic in a human patient. The patient, 61-year-old Barney Clark, survived for 112 days with the artificial heart.

1983: Eli Lilly and Co, American pharmaceutical firm, markets for the first time insulin hormone manufactured by the use of genetically engineered bacteria.

1984: Leonard L. Bailey, American surgeon, transplants a baboon's heart in a 12-day-old infant afflicted with a congenital heart defect. The infant, named Baby Fae, died 21 days after the transplant.

irritation.

Neuritis is the inflammation of nerve or several nerves. It is often associated with pain along the course of the inflamed nerve.

Neurodermatitis is the inflammation of the skin caused by a nervous disorder.

Ophthalmoplegia is the paralysis or weakness of the muscles which control eye movements. The cause is usually a disorder of the nerves from the brain.

Osteomalacia is an abnormal condition in adults, similar to rickets in children, in which the bones gradually become softened due to lack of calcium and phosphorus. It is generally caused by a deficiency of Vitamin D.

Otitis is the inflammation of the ear caused by fungus infection or germs that grow in the ear-wax.

Paraplegia is a type of paralysis in which the legs and lower part of the body are affected. The cause may be an infection of the nervous system such as in polio, or damage to a part of

JARVIK JARGON

First it was Barney Clark. Now it's William J. Schroeder. The second person in the world to receive a Jarvik-7, an artificial heart, continues to live very really! The Jarvik-7, about the same size as a human heart, consists of two hollow chambers of polymethane and aluminium, and each contains a flexible plastic diaphragm. Two plastic hoses alternately swell and collapse the diaphragms to pump blood through the pulmonary artery to the lungs and aorta. But while this heart facilitates living, it certainly restricts movement because the recipient of the heart has to spend most of his time tethered to a large and cumbersome air compressor through six-foot long hoses. In any case, if Schroeder manages to pull through and continues to live then it will surely be heartening news for heart patients. So Jarvik-7—beat on!



Perky pedalling: Barney Clark, the world's first artificial heart recipient, pedalling a bicycle exerciser.

the brain or the spinal cord by injury or a tumour.

Pneumoconiosis is a general term for the formation of fibrous tissue in the lungs by inhalation of dust laden air. The condition reduces the efficiency of the lungs.

Pneumonia is the acute inflammation of the lungs, in which the tiny air sacs become filled with fluid making breathing difficult. The cause is generally a bacteria.

Poliomyelitis is an acute infection of the central nervous system by a virus which often leads to paralysis of certain organs and limbs.

Scurvy is a disease caused by a severe lack of Vitamin C in the diet.

Sepsaemia is the medical term for blood poisoning.

Spondylitis is the inflammation of one or more of the vertebrae, the bones in the spine. It may be caused by an injury, or may be due to other diseases such as arthritis or tuberculosis.

Stomatitis is the inflammation of the inside of the mouth due to any of the several causes including local infection of the gums or inflammation of the tongue.

Tetanus is a serious infectious disease which causes spasms of the muscles. Caused by a poisonous substance (toxin) released into the blood by a type of bacteria found in the soil.

● The earth rotates on its axis from west to east.

This rotation makes the sun and the stars appear to be moving across the sky from east to west.

● The sky appears blue because the light of the sun is spread or scattered by the myriad dust particles in the air. In space, the sky would appear black as there are no dust or air particles to scatter the light.

● The launching of earth-satellites should be from a place near the equator to take the fullest advantage of the earth's movements. The regions of the earth close to the equator are moving fastest through space as compared to regions elsewhere. Thus, at the equator, rockets would start off with a speed of nearly 1600 km/hour. Further, rockets are usually fired in the direction of the earth's rotation, i.e. into the east for the same reason.

● At places having extremely cold climate, water pipes sometimes burst in winter. This is due to the expansion of water on freezing. The force of expansion acting on the pipes is sometimes sufficient enough to cause the bursting of pipes.

● The freezing compartment inside a refrigerator is at the top because the air in contact with it becomes cold and heavy and sinks downwards, cooling the rest of the compartment. The relatively warm light air at the bottom

EVERYDAY SCIENCE

● When hot water is poured into a glass tumbler, heat does not easily pass from its inner surface to the outer surface. The two surfaces (inner and outer) expand by unequal amounts, which generally causes the glass tumbler to crack.

● A group of soldiers on a bridge are advised not to walk in step because their movement causes the bridge to vibrate. If they walk in step, the frequency of vibrations thus produced may match the natural frequency of vibration of the bridge: this will make the amplitude of vibration of the bridge very large, due to the phenomenon of resonance, causing the bridge to collapse.

● A swimmer just out of the river feels cold, particularly if it is windy, because of evaporation of water from his body surface. The evaporation is more on a windy day.

● A wick in a stove keeps burning continuously as kerosene rises in the wick due to capillary action.

● A copper vessel left in air for a long time turns green. This is due to the formation of copper carbonate when copper reacts with carbon dioxide and moisture present in the air.

● When the wind is blowing at high speed, the roofs of huts are sometimes blown away. The pressure at the top falls much below the pressure below the roof (Bernoulli's Theorem) due to high speed winds above the roof top causing the roof to be blown away.

● In deserts, day temperatures are very high and night temperatures extremely low, because the specific heat of sand is very low. It, therefore, absorbs heat readily and its temperature rises by a large degree during the day. At night, sand radiates heat equally readily, making the temperature low.

● Water extinguishes fire because as it evaporates, the temperature of the burning body is lowered thus retarding or stopping the burning action. Also, the resulting water vapour surrounds the burning substance cutting off oxygen supply, thus inhibiting the burning process. Infact, hot water will extinguish fire more quickly than cold water as hot water will vaporise faster.

● When you witness lightning, the flash is seen first and the thunder heard after a small interval. This happens because the velocity of sound is less than the velocity of light. Thus, although the flash will be seen almost at the same time as it occurs (velocity of light being 3×10^8 m/s) thunder is heard after a few seconds.

● A lightning conductor is a *pointed* metallic conductor, usually fixed to tall buildings which runs down to and is buried in the earth. Its main

purpose is to protect the building from the destructive effects of lightning. A charged cloud passing over a building induces an opposite charge on the lightning conductor. As the end of the conductor is pointed, the surface charge density becomes very large thus providing a stream of oppositely charged particles which neutralise the cloud before it can accumulate sufficient charge to cause damage to the building through a lightning discharge.

THE ANTARCTIC KRILL



The icy waters around the continent of Antarctica are the home of tiny red shrimp-like creatures called the krill which hold promise as a future food resource for mankind. Such is the abundance of these creatures in Antarctic waters that when they congregate near the surface, they stain the sea as if with blood. Scientific estimates of the amount of krill in Antarctic waters range from 183m to 1,350m tonnes. At present, only a small fraction of it is being harvested, mainly by the Soviet Union and Japan. The annual catch of krill by the two countries at present does not exceed 5,00,000 tonnes. When the fourth Indian Antarctic expedition gets under way, India will become the third country to go in for krill fishing in the Antarctic waters.

There is ample reason for man's interest in the Antarctic krill. In their vast swarms, these tiny crustaceans represent a potential source of human food. Biologists say that krills are a valuable, high-quality food—mainly protein, rich in essential amino acids, vitamins and minerals. Various krill products have been produced experimentally, including whole meats, coagulated paste, and protein concentrates. Large scale use of krill as human food is yet to come. Most of the krill harvested today goes in to fatten fish in fish farms or is processed into feed for livestock and poultry. But it has been forecast that by 2000 A.D., krill might become a

regular part of human diet even in the advanced countries of the world. For the poor Third World countries, the Antarctic krill offers an abundance of cheap protein.

The name krill comes from *krill*, an old Norwegian word once applied to tiny creepy-crawly things, lively vermin, and fish larvae. Today, the term is used for a wide range of whale food including tiny crabs and other crustaceans. The scientific name for the Antarctic krill is *Euphausia superba*. It is the almost exclusive food of the giant baleen whales that inhabit the southern oceans. Today, largescale hunting by man has almost killed off the once numerous whales leading to large abundance of the krill in Antarctic waters. Experts calculate that the potential annual yield of this "unutilised whale food" could exceed the present world harvest of all other edible marine species combined.

In appearance, the Antarctic krill looks like tiny shrimp with 11 pairs of legs. It is essentially herbivorous living on tiny, single-celled plants called diatoms or floating phytoplankton that abound in the polar waters. After hatching, *E. superba* develops slowly in the icy Antarctic waters. Growth to a mature length of about 6 cm may take three to four years. If food supply is not abundant, the Antarctic krill simply stops growing, resuming its growth only when enough food becomes available.

and the type continues till the whole compartment attains a uniform temperature.

- Alcohol is sometimes rubbed on the body of a person suffering from high fever. As soon as it is applied on the body, alcohol evaporates taking some of the body heat. Since evaporation has a cooling effect, the body temperature can be reduced considerably by rubbing alcohol.

- Whenever there is water loss from the body,

of the mouth and stimulating the sensation of thirst. Intake of fluid then helps in restoring the loss of water.

- Gigantism in human beings is due to the hyperactivity of acidophilic cells, present usually from birth. It results in abnormal linear growth of the skeleton, the subject attaining a height of 7-8 ft. There is a proportionate increase in the size of muscles and other tissues.

biophiles: Any element found in a living organism e.g., carbon, nitrogen, calcium.

blind spot: Point of entry of the optic nerve at the back of the eyeball where lack of nerve endings prevents reception of light stimuli.

bulb: Organ of reproduction comprising a stem with fleshy, scale-like leaves.

Caesarian section: Removing the foetus through an abdominal incision.

calcification: Deposition of calcium in body parts, necessary for bones but undesirable in tissues.

calorie: Metric system unit of heat, defined as the amount of heat required to raise the temperature of one gram of water by 1°C.

capacity: The degree of power and the current which a device can safely carry.

capillary action: The elevation or depression and adhesion or cohesion of a liquid in a thin tube, placed in the liquid; the phenomenon is attributed to surface tension between the molecules of the liquid and solid.

carcinogen: Any substance which can cause cancer.

cartilage: Tough elastic animal tissue in two forms: *hyaline*, where cells are embedded in a homogenous intercellular substance and *fibro*, in which the intercellular substance (known as matrix) is fibrous.

catabolism: (or katabolism): Process of breaking down tissues into simpler substances or destructive medical changes.

catalysis: The speeding up or promotion of a chemical reaction by a reagent (catalyst) which itself remains unchanged.

cauline: Referring to or belonging to the stem.

caustic: A substance which burns or corrodes organic tissue e.g. caustic soda.

chemiluminescence: Light produced by chemical action.

chemotropism: The attraction or repulsion of micro-organisms and cells to a chemical stimulus (attraction is called positive chemotropism while repulsion is called negative chemotropism).

chromosomes: Threadlike structures present in the nucleus of every animal and plant cell which carry the hereditary determiners or genetic material.

Clarke cell: A primary electric cell used as a standard of electromotive force. It is especially suitable for accurate measurement needs.

clone: An asexually produced group with members having a common ancestor. Here reproduction occurs either by simple mitosis, grafting or a similar process.

cohesion: Force of attraction between molecules of the same kind.

communications satellite: An earth satellite placed in orbit to provide optimum reflection of radio, television and other signals for a communications path between two points on the earth.

compound: Two or more different substances combined in definite proportions which acquire properties different from the original composing substances.

convection: Transmission of heat by movement in a gas or fluid because of temperature and density variations.

co-polymerisation: The combination of like or unlike molecules without loss of any atoms or molecules. The essential structural features of each molecular constituent are retained by the resultant form.

cosmogony: Any hypothesis concerning the

ALPHABETICALLY YOURS

abacus: A manual digital computer which has at least nine wire bars on which beads are strung. Basic arithmetic operations such as addition, subtraction, multiplication and division, are accomplished by sliding the beads from one end to the other of the wires. Originally used in ancient Greece and Rome the abacus is still popular in China and Japan.

aberration: In astronomy it connotes a seeming shift in position of a celestial body because of the observer's position on a moving earth as well as to the motion of light.

chromatic aberration: The dispersion of light due to the unequal bending of different wavelengths of light as they pass through a lens. This causes colour effects along the edges of images and can be corrected to a large degree.

spherical aberration: The distortion of images seen through a lens due to unequal bending of light rays passing through its centre and those passing through its edges.

ablation: In surgery it means removal of tissues; in geology, a wearing away of surfaces, while in aeronautics "ablation cooling" is the removal of materials from the surface of an aircraft travelling at hypersonic speed during re-entry in order to preserve the spacecraft.

acaulescent: A plant without an obvious stem or only a short one.

acceleration: The rate of change of velocity measured in time units: as per second per second (cm/sec²).

achene: The name given to a one-celled, dry, indehiscent fruit in which the testa and pericarp are not firmly attached.

achondroplastic: A type of dwarfism characterised by a shortening of limbs.

acoustics: The science of heard sound.

acromegaly: Abnormal physical development caused by excessive pituitary secretion—a disease causing gigantism or enlargement of the hands and feet.

adipose: Animal fat or connective tissue in which fat is stored and cells are distended.

albinism: Applies to animals and plants deficient in natural pigmentation—the absence of this results in white skin, whitish hair and pink eyes in animals.

amitosis: Direct cell division where the nucleus is halved without chromosome formation.

amorphous: In Biology, lower forms of life having no specialised structure; and in Chemistry, chemicals that have no crystallinity.

anabolism: Constructive metabolism; an animal or plant process in which food is converted to living tissue.

annealing: Tempering glass or metals to prevent brittleness, by regulating the rate of cooling



The long and the short of it: Heights vary throughout the world. Dwarfism can be caused by a lack of hormones in the pituitary gland. Sometimes this gland develops a tumour which enlarges the gland. The enlarged gland begins to secrete too many hormones, one of these being the growth hormone which affects the size of the skeleton. Such a person might reach a height of 2.4 m. The condition is known as gigantism.

after treatment by heat.

atavism: Reversion to a more primitive ancestral form.

azeotropic mixture: Mixture of two or more liquids having a constant boiling point.

bacteriophage: A bacterial virus, an ultra-microscopic biological substance having a dissolving (lytic) effect on bacteria.

barometer: An instrument that measures atmospheric pressure by means of a column of mercury (as in the case of a mercury-type barometer) or a pressure-sensitive barometer (aneroid type).

basal metabolic rate (BMR): The quantity of energy used by the human organism at rest based on oxygen consumption as well as heat produced and expressed in calories per hour per square cm of skin surface. BMR is thus the rate and extent of metabolism.

bell metal: Alloy of tin and copper used for making bells.

berry: Fruit with fleshy mesocarp and endocarp and seeds embedded within e.g., grape.

binary fission: Type of asexual reproduction by which a unicellular organism divides into two.

binomial nomenclature: Principle of using two identifying names for each species of plant or animal organism—genus name followed by species name.

origin of the universe.

countdown: Step by step course of action in the complex preparation of launching any propulsion rocket.

creep: Slow deformation, in metallurgy, of metals subjected to stress. This varies with temperature.

Curie point: The critical temperature above which ferromagnetic substances like iron and cobalt, lose their permanent magnetisation properties.

cybernetics: Study of control and communication mechanisms of complex machines and physiological mechanisms in animals.

cyclotron: An atomic acceleration which imparts particles with velocities equivalent to millions of electron volts in a powerful magnetic field between two electrodes, causing the particles to move in a spiral path with increasing speed.

cytology: Science which deals with cell structure and function, both in animals and plants.

damping: The progressive decrease, caused by dissipation of energy, in the amplitude of oscillations or waves.

decay: The disintegration of a radioactive atom, leaving behind a different element as in the case of a polonium atom which decays to form lead with the ejection of an alpha particle in the process.

dehiscence: The splitting open of a fruit or an anther.

deliquescent: Substance which absorbs moisture from the air and becomes liquid.

desiccation: Removing water from substances thus causing them to dry up.

dew: The condensation of water vapour of the air on the surface of cool bodies.

dialysis: Separation of substances through a semi-permeable membrane because of differing sizes of molecules of substances.

diathermancy: The transmission of infra red or heat rays.

diathesis: Constitutional weakness that makes an organism susceptible to a particular disease.

diffraction: The bending of light, radio or sound waves around the edges of an obstacle.

dolichocephalic: Condition where width of the skull is less than four-fifths of the length; long-headed.

double decomposition: Also called metathesis or exchange reaction, it is a type of chemical change in which elements or radicals of compounds involved trade places; e.g., $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{NaNO}_3 + \text{AgCl}$

ductility: Property of a material to undergo deformation or be drawn into wires without breaking.

dynamics: A branch of mechanics dealing with action of forces on bodies in motion or at rest.

dysbarism: The body symptoms caused by changes in atmosphere or space pressures. This does not include hypoxia.

earthing: Grounding of an electrical conductor as the earth usually has a zero potential.

ebullioscope: Instrument used to measure boiling points of solutions.

ebullism: Bubbles of water vapour in body tissues resulting from a reduction in environmental-atmospheric pressures.

echo: Reflection of sound waves from a surface which produces a repetition of sound. It also refers to reception of radio waves later than the



Regeneration — Oh! how generous: The artificial limb industry would have never evolved had man been endowed with the ability to regenerate and be able to grow lost arms and legs. However, some living creatures like the star fish and a few worms can replace their lost structure and organisms. And wonder of wonders, from a small part left of these creatures a whole new body can grow!

anticipated time.

ecology: Study of the relations of animate and inanimate organisms with respect to their physical and biological environment.

electrodes: Conductor elements at elevated voltage responsible for generating or influencing the flow of electric charges through an electrolyte, a gas or even vacuum.

electrolysis: The chemical decomposition of a compound in solution, molten form or natural form resulting from the passage of an electric current through it.

estrogen: Hormones, naturally produced by ovaries, affecting sexual characteristics of female mammals.

eugenics: Science dealing with race improvement through control of parentage.

extensors: Muscles which straighten flexed limbs.

eyepiece: A magnifying lens used in combination with an image forming lens in an optical instrument.

f number: The ratio of the focal length of a camera lens to its effective aperture.

filtration: Separation of solids from liquids with the help of a porous material which retains the precipitate.

fission: In physics it refers to the splitting of an atom's nucleus into two parts with an accompanying release of a large amount of radioactivity and heat, while in biology it implies asexual reproduction of a one-celled organism by division of the parent body into two or more reproductions.

fixing: Removal of silver halides left in the photographic film after development so as to 'set' the image.

fluorescence: Emission of radiation within the duration and also resulting from exposure to radiation from another source.

flux: An agent added during ore smelting to aid melting and get rid of impurities.

frequency: The number of regular vibrations or cycles occurring in a given unit of time. In electricity it means complete alternations in an alternating current per second.

fundamental: The lowest frequency of a complex vibration.

fuse: A metal safety device having a low melting point which breaks an electric current if it becomes excessive or overloaded.

galvanism: Production of electricity by chemical action. In physiology it refers to treatment or stimulation by an electric current.

garbage: Debris present in a space orbit consisting usually of expendable parts of space rockets.

genotype: The germ (reproductive cell) constitution of an organism.

ghosts: A duplicate television image caused

by a reflected signal in addition to the direct signal.

gonads: Organs of reproduction (ovary and testis) which produce gametes and also secrete gonadotropic hormones.

habitat: The natural living environment of an organism.

hail: The precipitation of ice pellets during a violent thunderstorm.

half-life: Also known as decay coefficient or disintegration constant; it is the period of time taken by half of a given number of atoms of a radioactive material to disintegrate or, in other words, it is the rate of decay of radioactive materials.

hemophilia: Abnormal tendency of haemorrhaging or bleeding heavily.

heredity: Transmission, through continuity of germ plasma; characteristics from parent to offspring.

herpetology: The branch of zoology dealing with reptiles and amphibians.

holophytic nutrition: Type of plant nutrition requiring photosynthesis of inorganic matter.

holozoic nutrition: Type of animal nutrition which requires consumption of food.

homeostasis: Regulation of variables by an organism in order to maintain a steady state of its internal physiological composition.

homocraft: Vehicles which can move on all kinds of terrain.

hydraulics: Study dealing with forces in liquids, particularly water.

hydrophilic: Easily hydrated colloids which do not coagulate readily.

hydrophobic: Colloids which do not hydrate easily and consequently coagulate readily.

hydroscope: Instrument used for viewing objects below the surface of water.

hydrotropism: Growth movement of plants in response to water.

hypoxia: Detrimental effects of lack of oxygen in body cells and tissues.

ignition: Bringing material to the point of combustion or incandescence.

illumination: Concentration of light from source to object measured in foot-candle, candle metres or lumens.

imbrication: Biological overlapping patterns e.g., scales of fish.

immunisation: Rendering humans or animals safe from diseases and foreign bodies.

inanimation: Illness or exhaustion resulting from deprivation of nourishment or inability to assimilate it.

incandescence: Luminosity which accompanies extreme heat.

inductance: Characteristic of a circuit which permits the occurrence of electromagnetic induction.

gases: Gases which have a molecular structure that tends to prevent formation of chemical compounds under ordinary conditions e.g., helium, neon, argon etc.

inertia: Tendency of matter to remain stationary but assume uniform direction and motion when under compulsion to move.

innervation: The reciprocal relation between antagonistic muscles so that when one contracts the other relaxes.

insolation: Rate of delivery of solar radiation per unit area of time.

insulation: Isolating an object by surrounding it with non-conducting material.

intermodulation: Distortion in electrical amplifiers caused when two frequencies combine to form sum and difference frequencies.

interphase: Stage of the cell nucleus when it is not actively involved in mitosis or splitting.

invert sugar: Mixture of levulose and glucose produced by hydrolysis.

irritability: The capacity of plant or animal tissue to respond to stimulation.

irradiation: The apparent enlargement of a brilliantly lighted object when seen against a dark background. It also refers to exposure to radiation.

isomerism: A given group of atoms can unite in more than one way to form a molecule. This

the presence of dust particles in the atmosphere.

lactation: Secretion of milk and sucking of the young.

lambert: A unit of brightness. It is equivalent to the uniform luminance of a perfectly diffusing surface emitting/reflecting light at the rate of one lumen per sq cm.

laser: An instrument which generates powerful beams of light by stimulating high energy atoms.

latency: A biological term that refers to the period of delay between stimulus and reaction.

latent heat: Amount of heat required to bring about change of state without an accompanying rise in temperature.

leaven: An agent used to facilitate the fermentation process, e.g., yeast.

lenticular: Having a shape like a double convex lens.

lignified: Process of impregnation of cell walls with lignin which makes them hard and woodlike.

limnology: Study of fresh waters which covers their chemical, biological and physical aspects.

linin: The lacy network in the nucleus of a cell which suspends chromatin granules and resists staining by dyes.

times a machine can multiply the force applied to it.

Megahertz: Unit of radio frequency equal to 1m cycles per second.

melting point: Temperature at which a solid substance changes into its liquid form.

meninges: Series of three membranes that cover the brain and spinal cord.

mesophyte: Plant that can grow in moisture conditions which are neither too dry nor too wet.

metabolism: Chemical activities occurring in cells of living organisms in which breaking up of substances into simpler parts (catabolism) and building up of complex substances from simpler ones (anabolism) take place simultaneously.

metamorphosis: Biological transformation during the growth process involving a change of structure, e.g., growth from a tadpole to a frog.

mitosis: Division of cells nucleus in which each chromosome splits into two and moves to opposite poles of the spindle so that each daughter cell receives each one of the chromosomes. Mitosis involves four steps namely prophase, metaphase, anaphase and telophase.

mnemonics: System for memory improvement involving symbols and fundamental principles

monovalent: Study dealing with form and structure of an organism without referring to functions.

mutation: A sudden genetic variation in the normal type of an organism due to a radical reorganisation of genes and chromosomes.

mycology: Study of fungi.

narcotic: Sleep inducing substance used as a pain reliever too.

nebula: Luminous misty mass in the sky that consists of a galactic system of faint stars (or island universes) or of gaseous matter with accompanying dustlike material.

necrosis: The death of a tissue part of an organ, in zoology, while in botany, it refers to a plant disease caused by dead tissue. Also, in cryogenics it is the localised freezing and killing of certain types of tumours.

neotony: The continuing of an early developmental stage in the adult form of a species e.g., the adult feathers of an ostrich resemble immature down feathers of flying birds.

neutral: A chemical substance which is neither acidic nor alkaline; or in physics, devoid of either positive or negative charge.

neutrino: A fundamental particle with a rest mass close to zero and having no electrical charge which is thought to be an emission product in the beta-decay process and meson disintegration.

noble metals: Metals having low chemical activity when compared to the very active base metals. Example of noble metals include gold, silver and platinum.

noise: Interference of a random nature which makes received signals different from the originally transmitted ones.

normal solution: Solution containing 1 gm equivalent of the dissolved substance per litre of solution.

nosology: Science of classification of diseases.

nucleonics: Application of nuclear science and techniques in fields such as Physics, Biology, Chemistry and astronomy.

nucleophilic: A base-catalysed reaction involving an electron donor as the reagent.



The gene(jus): The characteristics of parents are passed on to the child in the nucleus of the egg cell and in the nucleus of the sperm cell. These nuclei consist of a large number of particles called genes which are strung along threads like a necklace of beads. About 23 pairs of these strings develop when the egg and sperm unite. These are called chromosomes.

phenomenon is called isomerism.

isotonic: Describes two solutions having the same osmotic pressure.

isotope: Two atoms of the same element having the same nuclear charge but different masses. They contain the same number of protons in the nucleus.

jerk: In the flight of missiles or crafts it refers to the vector specifying the time rate of change of acceleration.

joule: A unit of electrical work equivalent to work done by an electric current of one ampere through a resistance of one ohm in one second.

junction: Contact point or surface in an electrical circuit.

katatone: With reference to metamorphic rocks it is a high temperature and pressure zone deepest in the depth zone classification.

keratin: Albuminous substance of horny tissue such as feathers and hair.

kindling temperature: Temperature at which a substance starts to burn, the ignition temperature.

kinaesthesia: Perception of movement or muscle sense. Afferent nerves perform this function.

kinetic energy: Energy possessed by a moving body or the capacity of an object in motion to do work.

koniroscope: Instrument used to indicate

liquation: Heating a metal to its melting point in order to separate it from metals of higher melting points.

liquefaction: The condensation of a substance in gaseous state to form a solid.

lixivation: Process of treating soluble and insoluble minerals with solvents to partly dissolve them. Precious metals can be extracted from their ores by this process.

luminescence: The giving off of cold light by bodies like fireflies or gems due to absorption of external radiant or corpuscular energy.

lysis: The swelling and bursting of host bacterial cells caused by infiltration of bacteriophage particles.

magnet: The natural or artificially induced property of a metal of attracting other similar metals.

magnification: Enlargement of the image of an object with the help of a lens. It also refers to the ratio between image size and object size.

marsupial: A warm-blooded, hairy mammal with an abdominal pouch to carry the under-developed young.

mastication: The crushing or chewing of food.

matrix: An intercellular substance enclosing cells. Also the formative cells for nails, teeth or other such structures.

mechanical advantage: The number of

nucleide: A nucleus having distinctive composition and properties and stable enough to be considered a specific, discrete form in itself.

nympb: An early development stage of an insect type characterised by gradual metamorphosis. The wings usually begin to appear at this stage.

occipital: Back of the head.

occlusion: Also known as adsorption, it refers to the ability possessed by certain solids to absorb gases on their surface without undergoing change in chemical properties.

occultation: The temporary obscuring of a celestial object by another.

oculist: Doctor who specialises in eye treatment.

oersted: Measure of magnetic field strength or intensity. One oersted is equal to a force of one dyne applied to a unit magnetic pole.

oestrus cycle: Process of hormone concentration release of eggs and uterine changes which control reproduction in animals.

oocyte: The diploid cell in a female in which meiosis begins and leads to the production of a single egg cell.

orbital: Path of an electron about the nucleus of an atom.

organic: Describes any substance which contains carbon.

oscillation: Vibrations or back and forth movement. In electric circuits this term refers to fluctuations which represent the flow of alternating charges.

osmosis: Process of unequal rates of diffusion of liquids through a semi-permeable membrane; the tendency in this case is for movement from a lower concentration fluid to one of higher concentration.

osteologist: Doctor who deals with bones.

oviparous: Producing young by eggs hatched outside the body as is the case with fish, birds and reptiles.

ovoviparous: Production of young by eggs which are hatched within the parent body but are separated from it by an egg membrane until such time as the embryo acquires maturity.

oxidation: The chemical reaction of oxygen with compounds and free elements. It however includes reaction where the combining capacity of an element towards nonmetal tends to increase by losing electrons to an oxidising agent.

pad deluge: The dousing of a missile launching pad with water so as to reduce temperatures generated at launch time.

paedogenesis: Developing of sexual maturity and reproductive capacity in larval animals or the young.

paleontology: Study of fossils, plants and animals leading to knowledge of past geological ages.

parachor: Relation between density and surface tension of a specified substance. It is proportional to molecular volume of the substance.

parallax: The apparent shift in position of a distant object when observed from different positions.

parasite: An organism living at the expense of another organism.

parthenogenesis: Reproduction from an unfertilised egg.

pathology: Science of diseases, their origin, nature, progress and effects on the body.

pedology: A science dealing with the type,

origin, properties and use of soils.

peristalsis: The progressive wavelike movements caused by muscular contractions particularly of the alimentary tract.

permeability: The property of a membranous substance of permitting the passage of another substance.

phagocytosis: The process by which any scavenger, blood cell or amoeba engulfs, ingests and destroys foreign matter invading the body.

phenology: Study of living organisms and their environment.

phenotype: A type identified by appearance regardless of its genetic makeup.

phloem: Portion of vascular bundle concerned with transport of synthesised food material and made of sieve tubes and cells.

phosphorescence: The giving off of light without the accompaniment of heat resulting from exposure to radiation from another source. The emission continues even after the exposure.

photosynthesis: The process by which green plants containing chlorophyll manufacture carbohydrates from water and carbon dioxide in the presence of sunlight.

phyllotaxy: Arrangement of leaves on a stem.

phylogeny: Evolution or development of a plant or animal species.

physiology: Branch of biology concerning the activities and life processes in both animals and plants as carried out by their various organs and parts.

plasmolysis: Collapsing of a cell's protoplasm caused by the loss of water through the cell wall by osmosis.

poikilothermal: The variable temperature disposition of animals.

polymerisation: Formation from simpler molecules of the same type, a complex molecule of greater molecular weight.

presbyopia: Far-sightedness due to loss of elasticity of the crystalline lens which occurs in advanced age.

pseudocoels: A false body cavity without a tissue lining.

psychical: Referring to mental activity.

putrefaction: The decomposition of organic matter especially proteins with a release of strong foul odour.

pyroelectric: The property of some crystal materials to become electrically charged upon heating.

pyrolysis: Chemical decomposition caused by application of heat.

qualitative analysis: Determination of chemical components and characteristics of a substance.

quantitative analysis: Determining the amount or percentages of chemical components of a substance.

Q-value: Energy absorbed or liberated during a nuclear reaction.

radioactivity: The emission of alpha or beta particles or gamma rays by nuclei of radioactive materials.

radio dating: Determining the age of substances or objects by means of measuring their radioactivity.

radiology: Branch of medicine using X-rays and other radioactive emanations to diagnose and treat certain diseases.

rarefaction: Increase in volume of a gas without a corresponding increase in mass which

causes it to glow. The bright glowing of iron or steel when cooled from a white hot temperature as it reaches a certain temperature.

rectification: Purifying a liquid by distilling repeatedly in order to obtain a product of pre-calculated strength.

regeneration: The renewal of a damaged organ or tissue.

remanence: The magnetic induction that remains in a substance upon removal of the applied magnetic field.

reversible reaction: A chemical reaction in which the products may react to form the original reactants. In a reaction like this which proceeds in both directions a state of equilibrium is reached at a certain temperature.

rheology: Study of the response of materials to an applied force. It deals with the deformation and flow of matter.

salinometer: Instrument used to measure the concentration of salt solutions.

saponification: Conversion of fats into soap in the presence of an alkali-like soda.

scatter effect: Dispersing of radio waves due to variations in topology of the earth.

slurry: Suspension of fine particles of a solid in a liquid.

sol: A colloidal dispersion in a liquid.

sonic: Movement at the speed of sound in aerodynamics.

stoichiometry: Branch of chemistry which deals with weights and proportions of elements in a chemical combination and the methods to determine them.

strabismus: Cross-eyed condition in which eye muscles fail to bring the two visual axes together on an object.

symbiosis: Condition wherein two dissimilar organisms are dependent on each other in various ways.

tactile: Refers to sense of touch.

tenacity: Characteristic of solids by which they resist being pulled apart.

torsion: The rotational stress or elastic twisting caused by two opposing couples acting in parallel planes.

toxicology: Scientific study of poisons, their origin, properties and behaviour.

transpiration: Loss of water vapour by plants particularly through leaves.

typhology: Science dealing with blindness.

valence: The capacity of an atom to combine with other atoms to form molecules or in other words, the combining capacity of an element.

vestigial: A part once developed and functioning which has degenerated in the embryo or ancestral form.

viviparous: Producing young which are living instead of being hatched from eggs.

wrought: Molded and hammered into shape.

xenogamy: Cross-fertilisation.

xyletomy: Cutting wood into sections for microscopic examination.

yield point: Smallest unit stress at which structural material will undergo deformation without increase of weight or load it will bear.

zoometry: Branch of science devoted to measuring of animal parts in relation to one another.

zwitterions: Dipolar ions.

zymology: Science dealing with enzymes.

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Practice Tests

In preparing these tests, we have tried to visualise the questions you are likely to face in your actual exam. Great care has been taken to frame questions which are of the same standard as those you'll encounter in your exam.

Rating : Evaluate your performance on the basis of the following score-card:

100 questions in 60 minutes	—	Excellent
60 questions in 60 minutes	—	Good
50 questions in 60 minutes	—	Fair
35 questions in 60 minutes	—	Poor

Tips : 1. Do not waste time over questions you are not sure about. 2. Give the problems some thought before choosing the answers. 3. Read the directions carefully before answering the questions. 4. Do not try to guess the answer.

SCIENCE

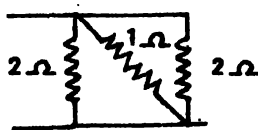
FOR NDA, POs, CDS...

Presuming that you are now familiar with the basics of Science, attempt the following practice tests meant for PO, NDA, CDS and other exams.

DIRECTIONS: For each question in Sections 1 & 2, tick mark the choice that best answers the question. Answers are given at the end of this test.

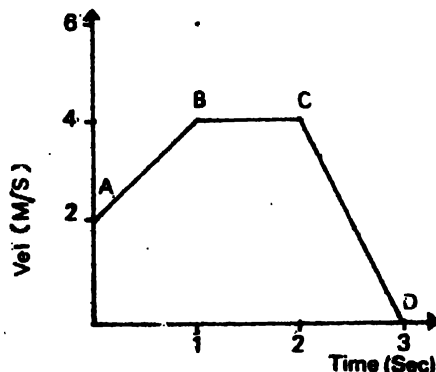
SECTION 1

- Joulesec is the unit of
 - Power
 - Angular momentum
 - Linear momentum
 - Energy
- _____ is the smallest planet?
 - Mercury
 - Pluto
 - Mars
 - Uranus
- The cause of bacillary dysentery, which took an epidemic form in West Bengal recently, is thought to be
 - Bacillus Papillae
 - Anopheles
 - Hepatitis-B
 - Shiga's bacillus
- _____ is not a nuclear nation.
 - France
 - The UK
 - China
 - Italy
- On heating, the resistance of _____ is likely to increase.
 - Germanium
 - Silver
 - Mercury
 - None of the above
- For a _____ gas, the ratio of specific heat at constant volume to specific heat at constant pressure is 0.6.
 - Monoatomic
 - Diatomic
 - Triatomic
 - None of the above



The equivalent resistance of the combination shown in the diagram above

- _____ is
 - 5 ohms
 - 2 ohms
 - 0.5 ohms
 - 0.2 ohms
- _____ was the first satellite to be repaired in space.
 - Challenger
 - Palapa-B
 - Solar Max
 - Soyuz-T11
- India's third Antarctic expedition sailed aboard
 - Polar Circle
 - Finn Polaris
 - Sagar Kanya
 - Columbia
- The time taken by INSAT-1B to complete one revolution around earth is nearly _____ minutes.
 - 54
 - 95
 - 780
 - 1440
- The velocity-time graph of a particle is

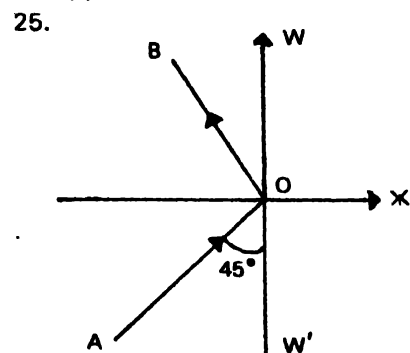


shown in the figure above. The force acting on the particle is withdrawn when it is at
(a) A (b) B

- _____ (c) C (d) Both at B and C
- The distance covered by the particle in the first two seconds is
 - 6 m
 - 5 m
 - 4 m
 - 3 m
- The velocity of light in a medium is
 - Same for all wavelengths
 - Maximum for red light
 - Minimum for red light
 - None of the above
- _____ is used in India for fumigating foodgrains.
 - Ethylene dibromide
 - Aldrin
 - Sodium arsenite
 - Copper sulphate
- _____ is the world's principal source of mercury.
 - Galena
 - Cinnabar
 - Bauxite
 - Monazite
- A nucleus of deuterium contains
 - 2 protons
 - 1 proton, 1 neutron and 1 electron
 - 1 neutron and 1 proton
 - 2 neutrons
- Oxidation is a chemical reaction which involves the _____ of an electron by an atom or an ion.
 - Gain
 - Loss
 - Gain or loss
 - Depends on the atom or ion
- The joining of two atoms of oxygen to form an oxygen molecule is an example of
 - Oxidation
 - Ionic bonding
 - Vander waal bonding
 - Covalent bonding
- The volume occupied by ice is (the) _____ than (as) the volume of water from which it is formed.
 - More
 - Less
 - Same
 - Depends on the ice
- When the cap of a bottle of soft drink is removed and the liquid poured into an open glass tumbler, there is rapid evolution of a gas. This is an example of
 - Evaporation

- (b) Effervescence
(c) Phosphorescence
(d) Sublimation

21. In _____, Hepatitis-B claimed several lives during April-May 1994.
(a) Gujarat (b) West Bengal
(c) UP (d) Maharashtra
22. Hepatitis-B virus affects the
(a) Brain (b) Kidneys
(c) Liver (d) Heart
23. Large thorium deposits are found in
(a) Tamil Nadu (b) Kerala
(c) Haryana (d) Maharashtra
24. The _____th World Energy Conference was held in New Delhi in September 1983.
(a) 5 (b) 10
(c) 12 (d) 15



A gas molecule moving along AO is reflected along OB (see diagram above), when it hits the wall WW' of a container. The force exerted on the wall due to collision is along
(a) OB (b) OX
(c) Along OX and OW' (d) OW'

26. The electric field inside a uniformly charged metallic solid sphere
(a) Decreases towards the centre
(b) Increases towards the centre
(c) Is constant (non-zero)
(d) Is zero
27. The following four wires are made of the same material. Which of them will have the largest resistance?
(a) Length—50 cm, diameter—2 mm
(b) Length—100 cm, diameter—4 mm
(c) Length—100 cm, diameter—1 mm
(d) Length—200 cm, diameter—2 mm
28. The S.I. unit for magnetic induction is
(a) Weber (b) Newton
(c) Tesla/m² (d) Weber/m²
29. The ratio of electrical force to gravitational force between a proton and an electron is nearly
(a) 2.2×10^{15} (b) 2.2×10^{39}
(c) 4.5×10^{-39} (d) 4.5×10^{-15}
30. If the N-pole of a bar magnet is brought near a circular coil from above, the

- current flowing in it
(a) Zero
(b) In the anti-clockwise direction
(c) In the clockwise direction
(d) In a direction which depends on the material of the coil
31. Vector A makes an angle θ with a given direction. The component of the vector in a direction perpendicular to the given direction is
(a) 0 (b) $\cos \theta$
(c) $A \sin \theta$ (d) A
32. When a magnet drops freely towards a closed coil, it will fall with an acceleration
(a) Less than g
(b) More than g
(c) Equal to g
(d) Equal to zero
33. _____ is not accelerated in an electric or magnetic field.
(a) Electron (b) Proton
(c) Neutron (d) α particle
34. The amount of radiation emitted by a surface per unit area per unit time varies with temperature T (as)
(a) Square of its absolute temperature
(b) Fourth power of its absolute temperature
(c) Inversely as the fourth power of T
(d) Inversely as square of T
35. The excess pressure inside a soap bubble is given by
(a) $T/2R$ (b) T/R
(c) $2T/R$ (d) $4T/R$
36. A stone is allowed to fall inside a well. After it has fallen through a sufficient distance,
(a) Its velocity will become constant
(b) It will stop
(c) It will keep on falling with a constant acceleration
(d) It will start oscillating about a mean position
37. Under similar conditions of temperature, the ratio of diffusion of CH₄ and SO₂ will be
(a) 0.5 (b) 1
(c) 2 (d) 4
38. The maximum number of electrons in the $n = 3$ orbit can be
(a) 6 (b) 8
(c) 12 (d) 18
39. A _____ compound will have the highest melting point.
(a) Covalent (b) Ionic
(c) Vanderwaal (d) Molecular
40. A polar covalent bond is (may be) formed between
(a) Atoms of the same element
(b) Atoms of different elements
(c) Atoms of the same as well as of different elements
(d) Atoms of compounds only
41. Which of the following halogens is most reactive?
(a) Fluorine (b) Chlorine
(c) Bromine (d) Iodine

42. Deficiency of _____ causes swelling of the thyroid gland.
(a) Bromine (b) Fluorine
(c) Iodine (d) Chlorine
43. Aqua-regia is a mixture of concentrated nitric acid and concentrated hydrochloric acid in the ratio
(a) 1:1 (b) 1:2
(c) 2:1 (d) 1:3
44. German-silver is an alloy of
(a) Ag, Cu and Zn
(b) Cu, Ni and Sn
(c) Cu, Zn and Ni
(d) Cu and Ag
45. Permanent hardness of water is due to the presence in water of
(a) Heavy water
(b) Calcium and magnesium bicarbonates
(c) Sulphates and chlorides of calcium and magnesium
(d) Sodium carbonate
46. In a colloidal solution, the size of the solute particles is of the order of
(a) 10 \AA (b) $100-1000 \text{ \AA}$
(c) $10,000 \text{ \AA}$ (d) 10^6 \AA
47. India ink is made from
(a) Charcoal (b) Graphite
(c) Lampblack (d) Cellulose
48. The boiling point of kerosene is in the range of
(a) $400-500^\circ\text{C}$ (b) $150-300^\circ\text{C}$
(c) $100-130^\circ\text{C}$ (d) $70-100^\circ\text{C}$
49. CH₄, C₂H₆, C₃H₈ are examples of
(a) Isomers (b) Homologues
(c) Allotropes (d) Isotones
50. A solid dissolves in a liquid with liberation of heat; with rise in temperature, its solubility will
(a) Increase
(b) Remain unchanged
(c) Decrease
(d) Increase or decrease depending on the solid
51. A nephrologist deals with the study of diseases of
(a) Nerves (b) Kidneys
(c) Teeth (d) Plants
52. Approximately _____ per cent of land area is under forests in India.
(a) 7 (b) 23
(c) 27 (d) 2
53. _____ is not concerned with eyes.
(a) Astigmatism (b) Conjunctivitis
(c) Hypermetropia (d) Encephalitis
54. Carrot is a rich source of
(a) Vitamin A (b) Vitamin C
(c) Vitamin D (d) Proteins
55. Vitamin _____ will increase one's resistance to infection.
(a) A (b) B
(c) C (d) D
56. Producer gas is a mixture of
(a) Methane, hydrogen and carbon monoxide
(b) Hydrogen and carbon monoxide
(c) Nitrogen and carbon monoxide
(d) Butane and methane

- (a) Apr 4 (b) Jun 6
 (c) Nov 19 (d) Dec 14
58. India has ____ national parks.
 (a) 8 (b) 12
 (c) 15 (d) 20
59. Adrenalin affects
 (a) Sugar metabolism
 (b) Blood pressure
 (c) Growth and metabolic rate
 (d) Kidney-urine volume
60. ____ is not a plant hormone.
 (a) Cytokinin (b) Auxin
 (c) Thyroxin (d) Gibberellin
61. Cement contains maximum amount of
 (a) Calcium oxide
 (b) Silicon oxide
 (c) Aluminium oxide
 (d) Calcium carbonate
62. Quicklime is
 (a) CaO (b) CaCO₃
 (c) Ca(OH)₂
 (d) CaOCl₂
63. The average gestation period for a cow is ____ days.
 (a) 150 (b) 285
 (c) 340 (d) 380
64. Penicillin was discovered by
 (a) Christaan Barnard
 (b) Louis Pasteur
 (c) Alexander Fleming
 (d) Edward Jenner
65. Angina pectoris is a disease of the
 (a) Liver (b) Heart
 (c) Kidney (d) Brain
66. Saffron commercial consists of ____ of the plant.
 (a) Roots
 (b) Leaves
 (c) Stigma
 (d) Anther and leaves
67. Bright's disease affects the
 (a) Eyes (b) Throat
 (c) Veins (d) Kidneys
68. Sleeping sickness is caused by
 (a) Contaminated water
 (b) Female anopheles mosquito
 (c) Tse-tse fly
 (d) Sleeping in a room with a burning charcoal furnace
69. Galena is an ore of
 (a) Zinc (b) Lead
 (c) Iron (d) Copper
70. The co-winner of Nobel Prize for Physics, for 1983, alongwith Prof S. Chandrasekhar, was Prof
 (a) K.G. Wilson (b) William Fowler
 (c) Abdus Salam (d) Weinberg
71. Apple is a type of
 (a) Berry (b) Drupe
 (c) Pome (d) Peps
72. ____ is a false fruit.
 (a) Tomato (b) Mango
 (c) Strawberry (d) Orange
73. Knots in wood are formed by
 (a) Ageing

- curling
 (c) A naturally occurring process
 (d) Regular chopping of wood
74. Triticale is a hybrid between
 (a) Wheat and rice
 (b) Wheat and pea
 (c) Gram and rice
 (d) Wheat and rie
75. Among Mendel's seven characters chosen for genetic experiments, which of the following was not present?
 (a) Pod colour
 (b) Pod shape
 (c) Leaf shape
 (d) Seed colour
76. Ephemeral is a plant which grows and makes seeds in
 (a) 6 months
 (b) 1 year
 (c) 2 years
 (d) Few weeks
77. Arrangement of foldings of leaves in a bud is called
 (a) Venation
 (b) Vernation
 (c) Vernalisation
 (d) None of the above
78. Caries is a disease of the
 (a) Teeth (b) Ears
 (c) Eyes (d) Lungs
79. Hydroponics is growing plants in
 (a) A glass house
 (b) Sand
 (c) Solution of necessary nutrients
 (d) Water
80. ____ is/are concerned with the discrimination of colour by the eye.
 (a) Rods (b) Cones
 (c) Both rods and cones
 (d) Neither rods nor cones
81. In the cut end of the stem, ____ is responsible for root initiation
 (a) Kinetin (b) Gibberellin
 (c) IBA
 (d) None of the above
82. Coir of coconut is the
 (a) Mesocarp of fruit
 (b) Endocarp of fruit
 (c) Epicarp of fruit
 (d) Endosperm
83. Litmus is obtained from
 (a) Moss (b) Algae
 (c) Lichen (d) Fungus
84. Cystolith of rubber plant is
 (a) Calcium oxalate
 (b) Calcium phosphate
 (c) Sodium oxalate
 (d) Calcium sulphate
85. ____ is a long-day plant.
 (a) Chrysanthemum (b) Wheat
 (c) Rice (d) Tomato
86. Satellite is
 (a) A naturally-occurring body moving around a planet
 (b) A man-made object moving around the earth
 (c) Any alloy containing iron

- chromium and tungsten
 87. Parsec is a unit of
 (a) Distance (b) Time
 (c) Velocity (d) Acceleration
88. ____ is used as moderator in a nuclear reactor.
 (a) Uranium (b) Cadmium
 (c) Sodium (d) Graphite
89. Mass of deuteron is
 (a) Equal to the mass of a proton (Mp) and mass of a neutron (Mn)
 (b) More than (Mp+Mn)
 (c) Less than Mp+Mn
 (d) Equal to mass of a neutron
90. Seedless fruits are obtained when unfertilised flowers are sprayed with
 (a) N.A.A. (b) I.A.A.
 (c) A.B.A. (d) Gibberellin
91. The region immediately above the earth's surface is called
 (a) Stratosphere (b) Troposphere
 (c) Tropopause (d) Ionosphere
92. ____ has maximum protein.
 (a) Wheat (b) Peas
 (c) Green gram (d) Coconut
93. Two wires W₁ and W₂ of the same length and material and radius R and 2 R, are connected in series. If a current is passed through them, the ratio of the heat developed in them will be
 (a) 1/2 (b) 1/4
 (c) 2 (d) 4
94. If the refractive index of glass with respect to turpentine oil is 1.1 and the refractive index of turpentine oil with respect to air is 1.4, the refractive index of glass with respect to air will be nearly
 (a) 1.54 (b) 1.27
 (c) 1.22 (d) 0.8
95. A galvanometer of resistance G shows a deflection θ when current is passed through it. If a resistance $G/10$ is connected in parallel with it, the deflection of the galvanometer would become nearly
 (a) 10θ (b) $\theta/10$
 (c) $\theta/11$ (d) $10\theta/11$
96. Two forces of magnitude 2 N each act on a body at an angle of 60° to each other. The magnitude of the resultant force acting on the body is
 (a) 2N (b) $2\sqrt{3}N$
 (c) $3\sqrt{2}N$ (d) $2\sqrt{3}N$
97. Uranium-233 has been used successfully by India to produce nuclear power in the ____ reactor.
 (a) Apsara (b) Poomima-II
 (c) Priyadarshini (d) Rohini
98. ____ does not occur naturally.
 (a) Uranium-233 (b) Uranium-235
 (c) Uranium-238
 (d) All of these occur in nature
99. If C and R denote capacitance and resistance respectively, the units of CR will be
 (a) Volt (b) Ohm

- (c) Second (d) Second-1
100. The Chairman of the Atomic Energy Commission is
(a) Prof M.G.K. Menon
(b) Prof U.R. Rao
(c) Prof Satish Dhawan
(d) Dr Raja Ramanna
 101. If the radius of the earth were one half its present value, the value of the acceleration due to gravity on its surface would be nearly.
(a) 4.9 m/s² (b) 19.6 m/s²
(c) 2.45 m/s² (d) 39.2 m/s²
 102. Man has been in outer space for a maximum period of nearly _____ months.
(a) 3 (b) 4.5
(c) 6 (d) 7
 103. Spot the odd one out.
(a) Neutrino (b) Electron
(c) Proton (d) Muon
 104. Aditya is the name of the
(a) First Indian nuclear reactor
(b) First Indian satellite
(c) India's proposed nuclear fusion generator
(d) India's cosmic ray research project to go aboard the US space shuttle
 105. The first human being to walk in space without a life line is
(a) Svetlana Savitskaya
(b) Bruce McCandless
(c) Robert Stewart
(d) Kathryn Sullivan
 106. _____ number of satellites have been launched into space so far.
(a) 500 (b) 1,500
(c) 2,700 (d) 3,500
 107. Under how many different names has the US launched its space shuttles?
(a) One (b) Two
(c) Three (d) Four
 108. The first Indian geostationary satellite was
(a) Aryabhata (b) Rohini
(c) APPLE (d) INSAT-1B
 109. Rohini revolved around the earth once every
(a) 66 min (b) 95 minutes
(c) 24 hours (d) 2 days
 110. The volume of a given amount of water is the
(a) Same at all temperatures
(b) Minimum at 4°C
(c) Maximum at 4°C
(d) Maximum at 4°F
 111. The escape velocity at the surface of the moon is nearly
(a) 2.4 km/s (b) 7.4 km/s
(c) 11.2 km/s (d) 60.8 km/s
 112. The boiling point of sea water at atmospheric pressure is
(a) 100°C
(b) More than 100°C
(c) Less than 100°C
(d) None of the above
 113. Tokamaks are

- (a) Fundamental particles of which all other particles are made up of
(b) Nuclear power generators using nuclear fission as a source of energy
(c) Nuclear fusion generators
(d) None of the above
114. Which of the following have frequencies in increasing order?
(a) Radio waves, X-rays, microwaves
(b) X-rays, microwaves, radiowaves
(c) Radiowaves, microwaves, X-rays
(d) Microwaves, radiowaves, X-rays
 115. India's cosmic ray research project to go aboard the US space shuttle Challenger is
(a) Apsara (b) Anuradha
(c) Aditya (d) Priyadarshini
 116. The weight of a person will be zero
(a) On the surface of the moon
(b) In an orbiting geostationary satellite only
(c) In any orbiting satellite
(d) At all points inside the surface of the earth
 117. Velocity of sound is maximum in
(a) Gases (b) Liquids
(c) Solids (d) Vacuum
 118. If there was no atmosphere around us (and suppose we could live in such circumstances), the sky would appear to us to be
(a) Blue (b) Black
(c) White (d) Greenish
 119. An object on the surface of the earth at a point on the equator moves with a velocity of nearly
(a) Zero (b) 600 km/hr
(c) 1,200 km/hr (d) 1,600 km/hr
 120. A water tank 6 ft deep would appear to an observer to be nearly _____ ft deep.
(a) 4 (b) 6
(c) 4.5 (d) 5.2
 121. An ice cube is floating in a glass of water. When the ice melts, the level of water in the glass will
(a) Remain the same
(b) Increase
(c) Decrease
(d) None of the above
 122. An electric fuse blows off when an electric device is plugged in. The fuse may not blow off if we use a _____ wire of the same material.
(a) Thinner (b) Thicker
(c) Longer (d) Shorter
- B.L.A.
- ### SECTION 2
1. _____ % of incoming solar radiation is utilised in photosynthesis.
(a) 0.01 (b) 0.1
(c) 0.2 (d) 1.0
 2. _____ carat is pure gold.
(a) 22 (b) 20
(c) 24 (d) 18
 3. Alternating current cannot be used in
(a) The refrigerator (b) Welding

- (a) Electroplating (b) Heating
4. Malaria affects the
(a) Pancreas (b) Liver
(c) Spleen (d) Kidney
 5. Soft drinks are normally filled with pressurised
(a) Carbon monoxide
(b) Carbon dioxide
(c) Air
(d) Nitrogen
 6. Sea of Tranquility is on the
(a) Moon (b) Earth
(c) Mars (d) Jupiter
 7. One quintal is equivalent to
(a) 10 kg (b) 50 kg
(c) 1,000 kg (d) 100 kg
 8. Borlaug award is given for
(a) Literature
(b) Agriculture
(c) Space science
(d) Journalism
 9. What causes solar energy?
(a) Nuclear fission
(b) Nuclear fusion
(c) Shining of the Sun
(d) Sun spots
 10. The human heart beats _____ times per minute.
(a) 80 (b) 65
(c) 70 (d) 90
 11. Gelatin is added to ice-cream to
(a) Avoid crystal formation
(b) Hasten freezing
(c) Give flavour
(d) None of the above
 12. _____ metal is used in storage batteries.
(a) Zinc (b) Tin
(c) Lead (d) Copper
 13. _____ has been eradicated worldwide.
(a) Cholera (b) Chickenpox
(c) Cataract (d) Smallpox
 14. Laws of heredity were formulated by
(a) Robert Hooke
(b) Charles Darwin
(c) Gregor Mendel
(d) Trevor Bailey
 15. The India-born US scientist who won the Nobel Prize in Medicine is
(a) C.V. Raman
(b) J.V. Narlikar
(c) J.C. Bose
(d) Hargobind Khorana
 16. Sriharikota is situated in
(a) Andhra Pradesh
(b) Tamil Nadu
(c) Kerala
(d) Rajasthan
 17. India's first nuclear reactor is
(a) Zerlina (b) Circus
(c) Apsara (d) Rohini
 18. Man used _____ first.
(a) Iron (b) Gold
(c) Copper (d) Aluminium
 19. The doctor checks the pulse for a _____ count.
(a) Temperature
(b) Blood pressure

20. Caloric is the unit of
(a) Pressure (b) Power
(c) Flow of water (d) Heat
21. Indian Standard Time (IST) is the local time of _____ meridian.
(a) $82\frac{1}{2}^\circ\text{E}$ (b) $88\frac{1}{2}^\circ\text{E}$
(c) 90°E (d) $80\frac{1}{2}^\circ\text{E}$
22. The chick comes out _____ days after the egg is hatched.
(a) 14 (b) 7
(c) 21 (d) 28
23. The liver
(a) Stores glucose as glucogen
(b) Helps in digestion
(c) Promotes respiration
(d) Purifies the blood
24. Age of a tree can be determined by
(a) Counting annual rings
(b) The thickness of the bark
(c) The number of leaves
(d) Its height
25. In the Einstein equation $E=mc^2$, c denotes
(a) Velocity of sound
(b) Wavelength of light
(c) Velocity of light
(d) Constant factor
26. Rain-yielding cloud is known as
(a) Cumulus (b) Nimbus
(c) Circus (d) Streamer
27. Vitamin C is also called
(a) Folic acid (b) Niacin
(c) Citric Acid (d) Ascorbic acid
28. The SI unit of temperature is
(a) Kelvin (b) Celsius
(c) Centigrade (d) Fahrenheit
29. Oncology is the study of
(a) Birds (b) Cancer
(c) Tissues (d) Mammals
30. Analgesics are used to relieve
(a) Fever (b) Pain
(c) Nervousness (d) Anxiety
31. To a spaceman, the sky would appear
(a) Blue (b) Black
(c) Pink (d) Violet
32. _____ is not used for the production of atomic energy.
(a) Radium (b) Uranium
(c) Thorium (d) Barium
33. Black Holes are celestial bodies which have a strong _____ force.
(a) Electric (b) Magnetic
(c) Gravitational (d) Cosmic
34. Plants are green because of
(a) Haemoglobin (b) Xanthophyll
(c) Chlorophyll (d) Anthocyanin
35. Light-year is the unit of
(a) Velocity (b) Distance
(c) Light (d) Time
36. The sex of a child before birth can be determined by
(a) Amniography (b) Amnioscopy
(c) Amniotomy (d) Amniocentesis
37. Morning and evening, the sun appears red. Why?
- (b) Reflection of light
(c) Refraction of light
(d) Velocity of light
38. The earth is nearest to the sun in
(a) July (b) June
(c) January (d) April
39. Deficiency of _____ causes diabetes.
(a) Sugar (b) Glycogen
(c) Iodine (d) Insulin
40. The commonly-used coolant in refrigerators is
(a) Ammonia (b) Freon
(c) Oxygen (d) Nitrogen
41. When iron rusts, its weight
(a) Increases (b) Decreases
(c) Remains the same
(d) First increases and then decreases
42. Municipal water is commonly treated with
(a) Bleaching powder
(b) Alum
(c) Chlorine gas
(d) Potassium permanganate
43. _____ changes its colour.
(a) Lizard (b) Turtle
(c) Viper (d) Chameleon
44. _____ is the brightest planet.
(a) Mars (b) Venus
(c) Mercury (d) Jupiter
45. _____ rocks are formed when molten magma solidifies.
(a) Metamorphic (b) Igneous
(c) Sedimentary
(d) None of the above
46. _____ energy causes least pollution.
(a) Solar (b) Thermal
(c) Nuclear (d) Chemical
47. Cosmology deals with
(a) Cosmetics (b) Medicine
(c) Universe (d) Satellites
48. The essential component of cement is
(a) Gypsum (b) Sandstone
(c) Limestone (d) Bauxite
49. Stainless steel is made up of
(a) Copper and cadmium
(b) Zinc and tin
(c) Chromium and carbon
(d) Aluminium and zinc
50. _____ is not a primary colour.
(a) Red (b) Blue
(c) Green (d) Yellow
51. The fastest growing tree is
(a) Casuarina (b) Teak
(c) Eucalyptus (d) Mango
52. All biochemical reactions in a living organism come under
(a) Anabolism (b) Metabolism
(c) Catabolism
(d) None of the above
53. The only diamond mine in India is located in
(a) Maharashtra
(b) Madhya Pradesh
(c) Karnataka
(d) Rajasthan
54. Who wrote *Origin Of Species*?
- (b) Charles Darwin
(c) Thomas Huxley
(d) Francis Hitching
55. The lowest temperature theoretically possible is
(a) -273°C (b) -273.15°C
(c) -270°C (d) -237.15°C
56. Study of sound is known as
(a) Decibel (b) Blastics
(c) Caustics (d) Acoustics
57. Aero-metal is an alloy of
(a) Aluminium, lead and copper
(b) Aluminium, zinc and iron
(c) Aluminium, zinc and copper
(d) Aluminium, lead and iron
58. Nitrogen was formerly called
(a) Natrium (b) Azolla
(c) Azote (d) Nicotine
59. Bordeaux mixture is a(n)
(a) Insecticide (b) Herbicide
(c) Nematicide (d) Fungicide
60. Milk protein is known as
(a) Caesin (b) Pepsin
(c) Lactin (d) Albumin
61. Acid rain is caused by
(a) South-west monsoons
(b) Humidity
(c) Pollutant gases
(d) Population explosion
62. The element of an electric heater is made of
(a) Copper (b) Tungsten
(c) Nichrome (d) Aluminium
63. Trachoma is a disease of the
(a) Liver (b) Eye
(c) Brain (d) Kidney
64. _____ water contains calcium and magnesium ions.
(a) Heavy (b) Lime
(c) Hard (d) Soft
65. Human blood is _____ in nature
(a) Acidic (b) Alkaline
(c) Neutral
(d) None of the above
66. Alfred Nobel invented the
(a) Atom bomb
(b) Machine gun
(c) Dynamite
(d) Hydrogen bomb
67. Galena is the ore of
(a) Lead (b) Antimony
(c) Bismuth (d) Copper
68. The equatorial radius is _____ miles.
(a) 3.963 (b) 3.693
(c) 3.669 (d) 3.369
69. A mixture of alcohol and water can be separated by
(a) Evaporation (b) Filtration
(c) Decantation (d) Distillation
70. If a red object is seen in blue light, it will appear
(a) Violet (b) Red
(c) Green (d) Black
71. Time taken by sunlight to reach the earth is
(a) 15 sec (b) 8 sec
(c) 15 min (d) 8 min

72. EEG is related to the
(a) Brain (c) Heart
(c) Eyes (d) Kidneys
73. _____ is responsible for the colour of the human skin.
(a) Melanin (b) Carotin
(c) Melanin (d) Anthocynin
74. _____ is the largest planet.
(a) Pluto (b) Saturn
(c) Jupiter (d) Neptune
75. Selenology is the study of
(a) Selenium (b) Moon
(c) Venus (d) Mars
76. _____ is the most abundant element in the human body.
(a) Carbon (b) Oxygen
(c) Iron (d) Nitrogen
77. Common household sugar is
(a) Glucose (b) Galactose
(c) Maltose (d) Sucrose
78. In Siberian winter, water in the lake starts freezing first
(a) At the bottom
(b) At the surface
(c) In the middle
(d) None of the above
79. Humidity in air is measured by
(a) Hydrometer (b) Hygrometer
(c) Barometer (d) Manometer
80. The most essential element for plant growth is
(a) Nitrogen (b) Phosphorus
(c) Potassium (d) Sulphur
81. _____ records the intensity of earthquakes.
(a) Electograph (b) Oscilloscope
(c) Seismograph (d) Spectrograph
82. _____ is called Plaster of Paris.
(a) Calcium sulphate
(b) Calcium ammonium sulphate
(c) Magnesium sulphate
(d) Copper sulphate
83. Dry ice is
(a) Liquid CO₂ (b) Water vapour
- (c) CO₂ gas (d) Solid CO₂
84. _____ is the longest and heaviest human bone.
(a) Tibia (b) Femur
(c) Humerous (d) Clavicle
85. The minimum velocity required to escape from the earth's gravitational field is _____ km/sec.
(a) 11.9 (b) 11.2
(c) 11.6 (d) 11.4
86. _____ measures the angle of crystals.
(a) Anglometer (b) Goniometer
(c) Tensiometer (d) Crystallometer
87. Mycology is the study of
(a) Algae (b) Bacteria
(c) Fungi (d) Actinomycetes
88. The Indo-Gangetic plain has _____ soil.
(a) Alluvial (b) Lateritic
(c) Red (d) Black
89. What's the Avagadro's number?
(a) 6.023×10^{21} (b) 6.023×10^{23}
(c) 6.023×10^{20} (d) 6.023×10^{25}
90. Einstein was awarded the Nobel Prize for (the)
(a) Theory of Relativity
(b) Einstein shift
(c) Photoelectric effect
(d) $E = mc^2$
91. Sunspots are
(a) Dark spots on the sun
(b) Spots due to heat stroke
(c) An eclipse of sorts
(d) None of the above
92. _____ is the most important constituent of soil.
(a) Sand (b) Silt
(c) Clay (d) Earthworms
93. Sariska Wildlife Sanctuary is situated in
(a) UP (b) Rajasthan
(c) Kerala (d) Madhya Pradesh
94. Man has _____ bones.
(a) 108 (b) 306
95. The Central Rice Research Institute is located at
(a) Dehradun (b) Cuttack
(c) Trivandrum (d) Hyderabad
96. A sudden fall in barometric pressure indicates
(a) Rain (b) Storm
(c) Hot weather (d) Clear sky
97. Man has _____ chromosomes.
(a) 48 (b) 46
(c) 44 (d) 42
98. Acupuncture is common in
(a) The US (b) India
(c) Japan (d) China
99. Unit of work is
(a) Joule (b) Dyne
(c) Pound (d) Newton
100. Greenhouse effect is due to the increase of _____ in the atmosphere.
(a) Nitrogen (b) Oxygen
(c) Helium
101. The normal temperature of the human body is
(a) 36.9°C (b) 98.4°C
(c) 50.8°C (d) 47.6°C
102. Cylindrical lens is used to correct
(a) Myopia (b) Astigmatism
(c) Hypermetropia
(d) Colour blindness
103. Isotopes of an element have the same
(a) Atomic mass
(b) Atomic number
(c) Density
(d) Atomic weight
104. Minamata disease is caused by
(a) Cadmium (b) Mercury
(c) Arsenic (d) Lead
105. _____ is a semi conductor.
(a) Silicon (b) Carbon
(c) Aluminium (d) Phosphorus

SUDHIRENDAR SHARMA & S.K. RAO

Section 1

ANSWERS

Section 2

- | | | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1. (b) | 2. (a) | 3. (d) | 4. (d) | 5. (a) | 6. (a) | 1. (b) | 2. (c) | 3. (c) | 4. (b) | 5. (b) |
| 7. (c) | 8. (c) | 9. (b) | 10. (d) | 11. (b) | 12. (d) | 6. (a) | 7. (d) | 8. (b) | 9. (b) | 10. (c) |
| 12. (b) | 14. (a) | 15. (b) | 16. (c) | 17. (b) | 18. (d) | 11. (a) | 12. (c) | 13. (d) | 14. (c) | 15. (d) |
| 19. (a) | 20. (b) | 21. (c) | 22. (c) | 23. (b) | 24. (c) | 16. (a) | 17. (c) | 18. (c) | 19. (c) | 20. (c) |
| 25. (b) | 26. (d) | 27. (c) | 28. (d) | 29. (a) | 30. (b) | 21. (b) | 22. (c) | 23. (a) | 24. (a) | 25. (c) |
| 31. (c) | 32. (c) | 33. (c) | 34. (b) | 35. (b) | 36. (a) | 26. (b) | 27. (a) | 28. (a) | 29. (b) | 30. (b) |
| 37. (c) | 38. (b) | 39. (b) | 40. (b) | 41. (a) | 42. (b) | 31. (b) | 32. (d) | 33. (c) | 34. (c) | 35. (b) |
| 43. (b) | 44. (c) | 45. (b) | 46. (b) | 47. (c) | 48. (b) | 36. (d) | 37. (a) | 38. (a) | 39. (d) | 40. (b) |
| 49. (b) | 50. (c) | 51. (b) | 52. (c) | 53. (d) | 54. (a) | 41. (a) | 42. (c) | 43. (d) | 44. (b) | 45. (b) |
| 55. (c) | 56. (c) | 57. (b) | 58. (d) | 59. (b) | 60. (c) | 46. (a) | 47. (c) | 48. (c) | 49. (c) | 50. (c) |
| 61. (a) | 62. (a) | 63. (b) | 64. (c) | 65. (b) | 66. (c) | 51. (c) | 52. (b) | 53. (b) | 54. (b) | 55. (b) |
| 67. (a) | 68. (c) | 69. (b) | 70. (b) | 71. (c) | 72. (c) | 56. (d) | 57. (c) | 58. (c) | 59. (d) | 60. (a) |
| 73. (b) | 74. (d) | 75. (c) | 76. (d) | 77. (b) | 78. (a) | 61. (c) | 62. (c) | 63. (b) | 64. (c) | 65. (b) |
| 79. (c) | 80. (b) | 81. (c) | 82. (a) | 83. (c) | 84. (a) | 66. (c) | 67. (a) | 68. (a) | 69. (d) | 70. (d) |
| 85. (b) | 86. (d) | 87. (a) | 88. (d) | 89. (c) | 90. (b) | 71. (d) | 72. (a) | 73. (c) | 74. (c) | 75. (b) |
| 91. (b) | 92. (c) | 93. (d) | 94. (a) | 95. (c) | 96. (b) | 76. (b) | 77. (d) | 78. (b) | 79. (b) | 80. (a) |
| 97. (b) | 98. (a) | 99. (c) | 100. (d) | 101. (c) | 102. (d) | 81. (c) | 82. (a) | 83. (d) | 84. (b) | 85. (b) |
| 103. (a) | 104. (c) | 105. (b) | 106. (d) | 107. (c) | 108. (c) | 86. (b) | 87. (c) | 88. (a) | 89. (b) | 90. (c) |
| 109. (b) | 110. (b) | 111. (a) | 112. (b) | 113. (c) | 114. (c) | 91. (a) | 92. (c) | 93. (b) | 94. (a) | 95. (b) |
| 115. (b) | 116. (c) | 117. (c) | 118. (b) | 119. (d) | 120. (c) | 96. (b) | 97. (b) | 98. (d) | 99. (a) | 100. (d) |
| 121. (a) | 122. (b) | | | | | 101. (a) | 102. (b) | 103. (b) | 104. (b) | 105. (a) |

AWARDED

The Krishnan Gold Medal for 1984 to B.H. Briz Kishore, visiting scientist at the Jawaharlal Nehru Technological University, for his contribution in the field of geohydrological modelling. The award was instituted by the Indian Geophysical Union (IGU) in 1964, to be awarded to eminent scientists in the field of earth sciences.

APPOINTED

Iqbal Akhund, former Pakistan Ambassador to the UN, as head of the UN Centre against Apartheid, replacing India's Enuga Reddy who retired at the end of 1984. Reddy, who joined the UN as an intern 37 years ago, took charge of its anti-apartheid activities 17 years later and was responsible for the Centre becoming a major force against South Africa's racist policies.

Marshal Serguei Sokolov, one of the three Soviet Deputy Defence Ministers, as Defence Minister succeeding Dmitri Ustinov upon the latter's death.

R.N. Kao, former Security Advisor to late PM Indira Gandhi, and Director of the Research and Analysis Wing (RAW), as member of the Policy Planning Committee of the External Affairs Ministry. Kao will assist the committee's Chairman, G. Parthasarathy.

Roland Dumas, the government spokesman and European Affairs Minister replaced Claude Cheysson French Foreign Minister in a minor Cabinet change announced on Dec 7.

ELECTED

Kurt Fugler, 60, the veteran Christian Democrat on Dec 6 as Switzerland's President for a year for the third time. Fugler was elected with 177 out of 222 votes by Parliament which chooses the President annually in rotation and according to seniority.

EDUCATION

Programme for the educationally backward: The National Council of Educational Research and Training (NCERT) is to take up its first exclusive programme for the educationally backward minorities at the instance of the Union Home and Education ministries. The emphasis will be on the improvement of the quality of education in minority pockets of the country. To end educational isolation of the minorities, NCERT will provide remedial classes, offer educational and vocational guidance and upgrade the quality of school education.

SCIENCE

Planet beyond solar system observed: Astronomers in the US have discovered what is apparently a giant ball of hot gas orbiting around the star *Van Biesbroek 8*, which is 200 light years from the earth, making it perhaps the first planet observed beyond our solar system. A university of Arizona team, led by Donald McCarthy Jr, calculates that the object must be some 30 to 80 times more massive than

Jupiter; the largest of the nine planets in our system. Further studies would be needed to determine characteristics of the object such as the timing of its orbit, its mass and chemical composition.

Spacecraft to study Halley's Comet launched: The Soviet Union on Dec 15 launched its first automatic spacecraft, *Veha*, for a meeting with Halley's comet in March 1986. The Venus-Halley's comet project was the result of collaboration between Soviet and European scientists. The spacecraft consists of two parts—the descent craft that will be lowered onto Venus and the craft that will fly onto the comet. The rendezvous will take place on Mar 6 and 9, 1986.

SPOT to facilitate urban planning in India: India is to utilise *Satellite Probatoire D'Observation De La Terre* (SPOT), the French remote sensing satellite, from next year for facilitating its urban planning programme. About Rs 1.5 crore have been set apart for establishing ground installations to receive photographs sent by SPOT. The cost of SPOT photo covering a 60 sq-km region will be Rs 10,000. According to ISRO director U.R. Rao, the first of the Indian series of operational remote sensing satellites will be launched from the Soviet Union in 1986. The design of the series will be compatible to the indigenous booster, the Polar Satellite Launch Vehicle (PSLV) which will be available in 1990. The PSLV has the capacity to place in orbit a 1000 kg class remote sensing satellite.

Fourth Antarctica team sails: The fourth Indian expedition to the Antarctica set sail from Goa's Mormugao Harbour on Dec 4. The 82-member expedition is led by Dr B.B. Bhat-tacharya, Director of the Indian School of Mines Dhanbad. The *Finn Polaris* has on board an 18-tonne crane, a garage structure, 300 tonnes of stores for the garage, 30 tonnes of materials for alternate accommodation and 40 tonnes of food, apart from scientific instruments. During its six-month stay on the frozen continent, the team will conduct studies and experiments in various fields including seismology, geology and biology. It will set up a new communication link between India and the *Dakshin Gangotri*.

SUCCESSFUL INDIAN OF '84

Have you reached a consensus? Write in whom you think fills the above bill. Only:

- The person must be an Indian citizen;
- Must not be a politician;
- Must have achieved something in 1984 which had made every Indian proud;
- Must have risen to the top.

As none of your candidates have received a clear mandate, the date of receiving nominations has been extended to February 25. Send in your entries on a postcard with your name, address and age. Also indicate in four lines the reason for your nomination. Of the 25 successful nominations the first 5 will be awarded books worth Rs 25. The next 20 will receive slick ball points.

The Successful Indian of '83 was Gavaskar.

India's manned station through INSAT-1B. Also, a six-member group will trek down to the South Pole, which is 6,000 km from the station. The cost of the expedition will amount to Rs 5.8 crore.

Scientists create comet: The world's first artificial comet was created on Dec 27 in an experiment designed to unlock the secrets of the solar winds and the earth's magnetic field. The \$ 78m experiment is part of a three-satellite study involving West Germany, Britain and the US. The comet streaked into space 112,500 km above the Pacific Ocean and its progress was monitored by the Applied Physics Laboratory at the John Hopkins University in Maryland, USA. The experiment, earlier scheduled for Christmas, was postponed because of poor viewing conditions and bad weather at various observation points.

India to invest in scientific research: India will spend about Rs 1,430 crore on research and development relating to science and technology during the current financial year. This is a 23% hike over the Rs 1,237.56 crore spent in 1981-82. Over 2,000 institutions in the public and private sectors are engaged in research and development activities now. In 1982-83, 0.85% of the GNP was devoted to such activities, about 18% of the expenditure on basic research, 37% on experimental development and 15% on other activities. About 87% of the expenditure was borne by the government and the rest by the private sector.

DEFENCE

Pakistan to get reconnaissance planes from USA: Pakistan is reportedly pressuring the US to sell it early warning reconnaissance planes to deter Soviet and Afghan air raids along its western border. Washington will probably send one aircraft to Islamabad early in 1985 for tests along the frontier. Pakistan reportedly wants at least two F-2C Hawkeye aircrafts, which are compact turboprop planes with radar domes. The aircraft will give the Pakistan Air Force enough warning to deploy its F-16s to deter intruders.

Anti-tank warhead for NATO: The US and its European allies - West Germany, Britain and France—have approved the joint development of a highly advanced anti-tank warhead. Development of the warhead will probably take six to seven years but it will provide NATO with a weapon that would overcome the Soviet Union's growing superiority in armoured vehicles. The first development contract will be awarded to a consortium of four companies—one from each country.

GCC members join forces to meet threats: The six Arab members of the Gulf Cooperation Council (GCC) have formed a joint military force to meet threats to the region's security. The formation of the force was announced on Dec 1, at the end of a three-day GCC summit. The force is ready to take "immediate action" in the event of foreign aggression.

Light Combat Aircraft to be made in India: The government has sanctioned a multi-crore rupee scheme for indigenously design-

ing and manufacturing a light combat aircraft. Addressing the 36th annual general meeting of the Aeronautical Society of India in New Delhi on Dec 1, Vice-President R. Venkataraman said India had "without doubt" demonstrated its ability to meet its defence requirements indigenously for military aircraft and other equipment.

Increase in world military expenditure: The world's military expenditure will cross the trillion-dollar mark in 1985, spending in 1984 is estimated at \$970b, according to a study by the US Government Arms Control and Disarmament Agency (ACDA). NATO and the Warsaw Pact countries account for nearly three-fourths of the present global defence spending. Growth in real military spending by developed countries, increased from an annual 2% in the 1970s to over 45% in 1982-84; in developing countries, the growth slackened from 12% in 1972-75 to 2% in 1982-84. The US and the Soviet Union have a combined armed forces strength of 6.5m, costing \$453b, in 1982. China, which has the biggest force in the world, numbering 4.5m, spent \$49.5b in 1982. The world now has 27.5m men in military uniform, ACDA estimates. Of them, 17m are in the developing world.

ENVIRONMENT

Environmental misuse can cause war: Misuse of environment can cause war and bloodshed, according to an international research organisation based in Washington. Soil erosion and massive deforestation in El Salvador and other Central American countries are as important as political factors threatening the region. Such problems could be the major causes of future wars and conflicts, says the author of *Environment And Conflict*. Starvation conditions similar to those in Ethiopia can break out soon in the African Sahel region, south of the Sahara, which is on the edge of "total ecological collapse". Deterioration of agriculture, has forced huge migrations to Third World cities and turned many of them into "time bombs" of violence and revolution. The worst may still be ahead.

World's most endangered species: The world's largest butterfly, the largest flower and the smallest mammal are all in danger of extinction, according to the International Union for the Conservation of Nature (IUCN). They are among 12 animals and 12 plants identified by IUCN as the world's most endangered species. The bumblebee bat, the smallest mammal in the world weighing just two grams, is being threatened by proposed hydroelectric projects in its habitat in Thailand. The world's largest flower, the giant one-metre-wide *Rafflesia*, is threatened by the destruction of rain forests in Sumatra. Queen Alexandria's birdwing of Papua New Guinea, the largest known butterfly measuring 30 cm, is also nearing extinction because of the expanding oil palm and logging industries.

NEIGHBOURS

Islamic parties form NUF in Bangladesh: Seventeen Islamic fundamentalist parties on Dec 9 formed a National United Front (NUF) in Bangladesh, pledging to resist forces of aggression and protect national independence and sovereignty. The Front's leader is former President Khandaker Mushtaque Ahmed. The Front

called for free elections under the suspended constitution to pave the way for withdrawal of martial law in the country.

Pakistan denies having nuclear capability: Pakistani Ambassador in the US, Ejaz Azim, on Dec 14 denied that Pakistan is about to join the nuclear club with the capacity to produce nuclear arms. Azim was responding to a statement by Leonard S. Spector, an authority on nuclear proliferation, that Pakistan had acquired nuclear weapons capability. But Azim declared that "we have no intention of going beyond peaceful uses for nuclear energy," saying Spector's theory was based on false assumptions. Spector, a senior associate with the Carnegie Endowment for International Peace, said in a recent study that with Pakistan now on the verge of nuclear capability the risk of a nuclear arms race in South Asia is sharply increasing.

Elections to be held in Bangladesh: Bangladesh president H.M. Ershad announced in December that elections for a new Parliament, twice postponed in the past one year, would be held in April 1985. Ershad also announced a five-point plan for transition from military rule, which includes phasing out of the posts of district, sub-zonal and zonal martial law administrators by Jan 31 and the dissolution of martial law tribunals and courts by Jan 15. Fundamental rights would be restored and high court jurisdictions revived by Jan 15.

ADB to give loans: The Asian Development Bank (ADB) has approved loans totalling \$6.2m to Pakistan, Bhutan and Nepal. The largest loan of \$40m went to Pakistan for the Chashma Area Development Project in the north-west frontier province (NWFP). Nepal receives \$17.8m for infrastructure improvements.

Zia to develop science: Pakistan President Zia-ul-Haq has approved a four-point programme aimed at developing a strong base for space science and technology in Pakistan over the next 10 years. As part of the programme, it plans to develop the capability to build and launch its own satellites. The programme also includes setting up tracking stations and receiving stations capable of transmitting and receiving signals from satellites.

CORE ISSUES

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- April will focus on the ever-topical Indian Polity.
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A serial on English by Prof R.P. Bhatnagar will run through the issues; some tips and articles on how to study for competitions will be an added boon.

Whatever competition, whichever exam—these specials are likely to see you through.

Indian pilot dies in crash: A Royal Airlines plane crashed on Dec 27, shortly after take-off from Tumlingtar, 250 km east of Kathmandu, killing 15 people. Among the victims was a member of the Nepalese National Legislature, Govinda Man Singh Adhikari, Capt Kuldip Krishna Wattal, the Indian pilot of the aircraft, and two other crew members.

Lankan minister dismissed: Sri Lanka's Minister for Industries and Scientific Affairs, Cyril Mathew, was dismissed on Dec 24 for publicly criticising President Junius Jayewardene's proposals to the all-party conference to solve the ethnic crisis. Mathew, a strong critic of minority Tamils, had said the proposals would rob the majority Sinhalese of their land. Mathew alleged his dismissal was made at the behest of India's G. Parthasarathy. The allegation was, however dismissed as "baseless" by the Indian External Affairs Ministry.

ECONOMY—National

Rupee worth highest in Calcutta: The real worth of the 1960 consumer rupee in September 1984 was the highest in Calcutta at 21.79 paise, and lowest in Jaipur at 17.12 paise. The all India average real worth of the rupee was 18.59 paise. Madras had a rupee value of 17.33 paise, Bombay 18.48 paise and Delhi 19.34 paise. The annual inflation rate was the highest in Hyderabad at 11.1% in September 1984 over September 1983, and the lowest in Pune at 6.5%. The all India average was 8.7%. Among the metropolitan cities, it was the highest in Madras (9.3%), followed by Bombay (8.9%), Calcutta (8.8%) and Delhi (8.6%).

Increase in trade between India and Spain: India and Spain have agreed to increase their volume of trade and will explore the possibility of Indian export of garments, tobacco, and finished leather to Madrid. India will study the possibility of applying Spanish technology in agriculture and fisheries. The present trade volume between the two countries is about Rs 165 crore annually, the major Indian exports being fish, coffee, pearls and precious stones. India imports synthetic fibre, iron and steel and printing paper from Spain.

Japanese team assured liberal policies: The then Finance and Commerce Minister Pranab Mukherjee on Dec 4 assured a high-level Japanese economic delegation that liberalised economic policies would continue and infrastructure facilities would be improved; they were the two pre-conditions set by the Japanese for higher investment in India. The 23-member delegation led by Goro Koyama, President of the Japanese Chamber of Commerce, was sent by PM Yasuhiro Nakasone to assess the investment climate in India. The delegation suggested that Japanese trading houses be allowed to operate in India to facilitate export of Indian goods and reduce India's adverse balance of trade which stood at 320m in 1983.

Hike in India-USSR trade turnover: India and the Soviet Union have agreed to increase their trade turnover to a record Rs 4,620 crore in 1985, a 20% hike over the current year's Rs. 3,840 crore. This will re-establish Moscow's status as India's largest trading partner. Exports from India are expected to touch Rs 2,500 crore (Rs 2,000 crore in 1984) and imports from the Soviet Union Rs 2,120 crore (Rs 1,840 crore in 1984). A protocol for 1985 was

After a week's talks in New Delhi on Dec 7 between delegations of the two countries. The protocol envisages a significant breakthrough in many of India's export sectors including chemicals (43%), textiles (36%) and engineering goods (25%).

Record production of potato in 1983-84: The all India production of potato reached an all time high of 12.25m tonnes during 1983-84, surpassing the 1982-83 production level by 23%. It also surpassed the previous peak of 10.13m tonnes achieved during 1978-79 by 21%. India is currently the fifth largest producer of potatoes in the world. During 1970-71 India ranked tenth among potato producing countries in the world. Potato is a supplement to cereal crops in many of the principal growing states in terms of carbohydrate content. In some of the developing countries, production of potato is also taken into account while reckoning total cereal production.

Improved industrial output: The National Council of Applied Economic Research (NCAER), in a mid-year review of the country's economy, says the overall economic prospects look a "shade better" with an increase in industrial production and a check on inflation. Timely and wide-spread rains for the second successive year hold out promise for as good a performance on the agricultural front as last year's. There is no reduction in the trade deficit but there is a notable rise in the country's foreign exchange reserves, mainly due to a spurt in remittances. These developments "reassure" a near 5% growth in the GNP during 1984-85, compared with 8.5% in 1983-84.

India's exports up by 11.7%: India's exports during September 1984 were worth Rs 806.66 crores and imports Rs 1,071.16 crores, taking the total exports and imports in the first six months of the financial year to Rs 5,024.26 crores and Rs 7,344.84 crores. That makes for a trade deficit of Rs 2,290.58 crores, Rs 134.58 crores lesser than what it was in April-September 1983. According to revised figures in the annual trade data for 1983-84, exports totalled Rs 9,965.30 crores and imports 15,762.95 crores. Figures for 1982-83 were Rs 8,834.21 crores and Rs 4,359.99 crores respectively.

Soft loan pact with Japan: India signed a soft loan agreement totalling 61,460m yen (about Rs 300 crore) with Japan on Dec 26, for five developmental projects in key sectors. They are: Anpara B thermal power station, the gas pipeline project, the Aonla fertiliser project, a telecommunication project, and the eastern Gandak canal hydro-electric project. The loans, which are to be repaid within 30 years at an annual interest rate of 2.75% to 3.25%, will be used to procure materials, equipment and services for the projects from Japan and other countries.

ECONOMY—International

EEC to provide aid: The 10-nation European Economic Community (EEC) and 65 African, Caribbean and Pacific (ACP) countries on Dec 8, signed a new five-year treaty on economic cooperation between Europe and its former colonies. The "Lome-III" treaty will go into effect in March to succeed the second Lome agreement, the main aim being to promote the independent economic development of the ACP countries. Under the new agreement,

the EEC will provide some \$5.5b worth development aid and make available low interest credits through the European Development Bank.

Investment: Guarantee Agency idea revived: The World Bank is reviving the idea of a Multilateral Investment Guarantee Agency (MIGA) to attract more foreign private investment into the Third World through guarantees against non-commercial risks. The proposed organisation will cover three traditional types of risks. One of these called the transfer risk, deals with the problem of converting local currencies, into foreign currencies and transferring them out of the country where the investment is made. Another is the expropriation risk covering nationalisation. The third risk to be covered is the war risk including war, civil unrest and public violence that may affect investments. It is proposed that the capital of the bank be \$1b.

Progress not linked to population: Efforts to pressurise poor countries into instituting family planning measures are unjustified on moral and economic grounds, according to Lord Peter Bauer of the London School of Economics. Bauer told a population seminar in Washington on Dec 6 that fast population growth has not held back economic progress in either rich or poor countries. He listed Malaysia, Taiwan, Hong Kong, among others, as countries where rapid population growth has been combined with "rapid, even spectacular economic growth for decades on end."

OPEC proposal on production and prices: OPEC's 12-member states, on Dec 27, agreed to create special group to enforce discipline within the cartel by policing production and prices. The lone dissenter was Nigeria which said it wants OPEC to let it sell at lower prices so that it would compete with Britain and Norway, non-members which have the same quality oil. The decision to create the special group was taken at OPEC's year-end conference in Geneva.

China and USSR to improve trade ties: China and the Soviet Union on Dec 28 signed three agreements on economic, technical and scientific cooperation at the end of a nine-day visit to Beijing by Soviet First Deputy Premier Ivan Arkhipov, the highest ranking Soviet leader to visit Beijing in 15 years. The two communist giants also agreed to establish a joint commission to oversee their developing economic, trade, scientific and technological relations.

World economy to lose buoyancy: The

world economy, which was buoyant in 1984 both in output and trade, will slow down in the new year, and non-oil developing countries will face uncertainties on the external payments front. Though some non-oil developing countries, like India, registered a creditable growth rate in 1984, as a group some of these face structural imbalances. Reduction of external imbalance in the developing world, has come through mainly from compression of imports rather than expansion of exports. But in the new year, export volumes are projected to decline by one percentage point, while import volumes are expected to be maintained at the 1984 rate. Their current account deficit is expected to increase to \$43b in 1985 after having fallen by \$2b to \$39b in 1984, because the terms of trade are likely to worsen.

STATES

MP Labour Minister resigns: The Labour Minister Shyam Sunder Patidar resigned on Dec 28 from the ministry, accepting moral responsibility for the Bhopal gas tragedy. The resignation was accepted by CM Arjun Singh "to respect the feelings of Patidar, who, it is abundantly clear, had no personal responsibility for the incident".

Tripura's Seventh Plan approved: With greater emphasis on social and community developments Tripura's draft Seventh Plan proposes an outlay of Rs 1,235.55 crore. The Plan was approved by the state Cabinet at a meeting on Dec 27. The state's annual Plan for 1985-86 has been fixed at Rs 202.86 crore.

Tohra elected SGPC President: Gurcharan Singh Tohra was on Nov 30 elected President of the Shiromani Gurudwara Prabandhak Committee for the 14th year. Tohra defeated SGPC Vice-President Arma Singh 72-53 in a straight contest. On the same day, the SGPC passed a resolution upholding the supreme status of the five high priests. It condemned the violence that erupted after the assassination of Mrs Gandhi and held the Congress (I) responsible.

Punjab will remain a restricted area till Feb 2, 1985. No foreign passport holder can enter Punjab for any purpose without obtaining a special permission granted by the government.

Attempt on Manipur CM's life: Manipur CM Rishang Keishing escaped unscathed from an attempt on his life on Dec 8, but four security personnel were killed and seven injured in the ambush on the CM's motorcade in Ukhrul dis-

A GARDEN OF EDEN

After a record grain harvest in the European Community, wine and fruit surpluses are expected too. The grape harvest is in full swing And, talking of fruits, let's not miss the apple of their eye: the 'forbidden fruit' is the German's favourite. Rhenish orchards have had a bumper apple harvest where about 800 growers gross DM 40m on 2,400 hectares. And they certainly don't go waste. For the Germans eat 45 kg of apples per head a year, including 15 kg imported from France, Italy, Holland, South Africa, New Zealand, Argentina and Chile. Sweet used to be the taste of 'original sin' in this Eden. Not any more. Now sweet-and-sour tops the pop list.



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India. It is reported to be on the list of the underground National Socialist Council of Nagaland which had earlier warned those contesting the Dec 27 elections of "dire consequences". All border outposts along the Indo-Burmese border in Manipur and Nagaland were put on a "red alert" following the ambush.

EVENTS—National

EC move for poll reforms: The Election Commission (EC) prepared a list of recommendations for modifications in the law after the 1984 elections to ensure fair, free and smooth polls. One of the prime recommendations will be to increase the security deposit to check non-serious candidates from contesting. The increase will be from Rs 500 to Rs 5,000 for the Lok Sabha poll and Rs 250 to Rs 2,500 for the Assembly. Another recommendation would be that candidates who fail to secure one-fourth of the votes should be disqualified and prohibited from contesting for another six years.

SC stays verdict in Escorts case: The Supreme Court on Dec 10 stayed the operation of the Bombay High Court judgement in the Escorts case, saying its interim order of Jul 31, 1984 relating to the arrangement and constitution of the Escorts board of directors would continue. The judgment came on two applications filed by the Life Insurance Corporation. On Jul 31, the Supreme Court had said that the directors who were purported to have been removed at the general body meeting and those elected in their place shall not function as directors until further orders.

India's concern over Pak actions: Foreign Secretary M. Rasgotra has conveyed to his Pakistani counterpart Niaz Naik, India's concern at Islamabad's recent actions, saying these were not conducive to improvement of relations between the two neighbours. Pakistan's tie-up with the terrorists, the arming of the hijackers of the Indian Airlines plane and its refusal to return the earlier hijackers or even to put them on trial, are glaring instances that cause only suspicion and misgiving. Rasgotra also drew Naik's attention to the manner in which Sikh extremists were allowed to indulge in "highly objectionable anti-Indian activities" at the Nankana Sahib pilgrimage.

Indo-Bangla river water talks: The Indo-Bangladesh joint rivers commission concluded its 27th meeting in New Delhi on Dec 15. It discussed the sharing of the Teesta waters, problems of embankments on rivers common to the two countries and the sharing of dry season flows of the Ganga, among other subjects. The next meeting will be in Dhaka.

Review of levy on newsprint: The Supreme Court on Dec 6 directed the government to re-examine the entire question of levy on imported newsprint and allowed as an interim measure a reduced rate of Rs 550 per tonne. The court passed the order while allowing with certain directions the writ petitions of the Indian Express Newspapers Ltd, which had challenged the levy of duty fixed at Rs 825 a tonne at present.

Fresh AASU, AAGSP demands: The AASU and the AAGSP, spearheading the movement against "foreigners" in Assam, have put forward fresh demands before the Election Commission (EC). The two bodies want their rep-

resentatives present at the time of scrutiny of electoral cards that have been filled in by prospective voters. They fear the Supreme Court directive that only citizens should fill the cards, is being violated. They also want the EC to carry out "total and extensive" scrutiny of the people living on reserved lands because most "non-citizens" live in those areas.

UK Defence Secretary's visit postponed: A visit to India by British Defence Secretary Michael Heseltine, due in February, has been postponed indefinitely at India's request. Britain's *Sunday Times* says the visit was postponed because of "India's anger at Britain's apparent refusal to curb the activities of Sikh extremists".

EVENTS—International

Hawke's party wins poll: PM Bob Hawke led his Labour Party to victory in the Australian general elections but with a reduced majority. Hawke secured an 18-seat majority in the expanded 148-seat Assembly, upsetting opinion polls which had predicted a bigger win than his 25-seat landslide win in March 1983.

NNP wins Grenada polls: The US-backed New National Party (NNP) won a landslide victory in Grenada's first general elections in eight years on Dec 4. Eleven NNP candidates won elections to the 15-member Parliament of the Caribbean nation which saw a leftist coup in 1979 and an American-led invasion last year. Herbert Blaize, the 66-year-old head of the NNP who will become PM, scored a personal triumph, receiving 1,662 votes to 147 from his nearest competitor, Lyle Bullen of the leftist Maurice Bishop Patriotic Front.

Warsaw Pact nations for reduction of N-arms: Foreign ministers of the seven Warsaw Pact nations on Dec 4 met in East Berlin and called for serious negotiations to reduce nuclear arms, saying that the "chance of a change for the better in the international situation now exists". They decided that the talks should cover the full complex of arms issues including medium range rockets based in Europe. "What is needed is a change to a policy of realism and businesslike cooperation in solving problems".

Draft treaty to outlaw torture: UN member states, including many who are accused of maltreating political prisoners unanimously joined on Dec 5 in adopting a resolution to outlaw torture. The General Assembly Social Committee approved the draft convention. The committee's action came after what US delegate Richard Schifter called "seven years of arduous negotiations". The treaty goes into force after ratification by at least 20 countries.

US assurance to UK on Star Wars: Reagan has agreed that the US will not deploy its controversial Star Wars missile defence system before holding talks with the Soviet Union. The agreement was voiced during a meeting between Reagan and British PM Margaret Thatcher at Camp David on Dec 22. Mrs Thatcher endorsed research on the Star Wars programme but reportedly stopped short of blessing its eventual deployment. Reagan also agreed that the US and the West should aim not at superiority but at a balance of forces.

No solution to Gulf war at Islamic meet: The annual meeting of foreign ministers from the 45-nation Islamic Conference Organisation

closed in Sanaa, South Yemen, on Dec 22 without progress on ending the war between Iran and Iraq. The meeting adopted a resolution calling for an end to the war, but it was dismissed by Iran's Foreign Minister Ali Akbar Velayati who said Teheran's aim was "complete victory" on the conflict. A new feature of the conference was the presence of Egypt for the first time since 1979. Egypt was suspended then for the peace treaty with Israel but it was invited back this year.

Singapore withdraws from UNESCO: Singapore has withdrawn from UNESCO, becoming the First Third World country to do so. The decision, according to Singapore's permanent representative to UNESCO, indicated neither disagreement with nor criticism of the organisation. "We're a small country and we've got priority objectives for our limited resources," he said.

US withdraws from UNESCO: The US on Dec 19 formally withdrew from UNESCO because of complaints about its Third World policies and budget. UNESCO had a year to take corrective action since the earlier US warning. But it had failed to substantially improve itself, a Washington statement said. It cited "extraneous politicisation," "endemic hostility towards the institutions of a free society, particularly those that protect a free press, free market, and above all individual human right" as UNESCO's basic faults.

Singapore PM returns to power: Singapore PM Lee Kuan Yew's People's Action Party (PAP) returned to power for another five-year term in the general elections held on Dec 22, winning 77 of the 79 seats in Parliament. The two other seats went to opposition leaders Joshua Jeyaretnam and Chiam See Tong. Lee promised to the people continued prosperity and a "glorious city of distinction in 1999".

Freedom of Namibia urged: The UN General Assembly on Dec 13 adopted a 69-point omnibus resolution 128-0 (25 abstentions), condemning "persistent attempts" by the US and South Africa to delay the independence of Namibia. US Ambassador Jeanne J. Kirkpatrick personally appealed to the Assembly's 159 members to delete specific, critical references to the US and Israel in the main resolution and in two related resolutions. But the Assembly overrode US objections to overwhelmingly adopt a total of five resolutions dealing with

WHERE VOLCANOES DARE

It is a generally accepted fact that volcanic eruption and earthquakes generally change the earth's surface. This is especially true of the Philippines and it is said that without volcanic eruptions, the Philippines would not have existed at all. For instance, the seven lakes of San Pablo were formed due to a powerful explosion, which occurred in an area of low relief some thousand years ago, known in science as 'Mar'. It created seven volcanic craters which became lakes. Similarly Lake Aligator and the Maujan Lake were formed as a result of volcanic eruptions.

The Philippines lies within the ring of fire where more than 75% of the world's 850 active volcanoes are located. It has 24 active volcanoes—12 in Luzon, seven in the Visayas and five in Mindanao.

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Hong Kong transferred to rule: British PM Margaret Thatcher and her Chinese counterpart Zhao Ziyang on Dec 19 signed a historic agreement transferring capitalistic Hong Kong to communist rule in 1997. The accord will end 150 years of British colonial rule in Hong Kong, the world's third largest financial centre. Thatcher said the pact removed a "shadow" that had clouded Sino-British relations.

Mauritanian President overthrown: Lt Col Mohamed Khouna Ould Haidalla, the Mauritanian Chief of State, was overthrown and a former Premier, Col Maouya Sid'ahmed Taya, assumed power on Dec 12. Haidalla was attending the 11th summit of Francophone African countries in Burundi when the coup took place. Haidalla had been President of the West coast African nation since January 1980. Mauritania is a former French colony which became independent in 1960. It has a population of about 1.5 m.

Cambridge University Press four centuries old: The year 1984 marked the 400th anniversary of the world's oldest publishing company, the Cambridge University Press. It is also 450 years since King Henry VIII granted the university its right to print.

MISCELLANY

India one of 53 'free nations': India is one of the 53 "free nations" and is rated No. 2 in respect of political rights and No. 3 in civil rights, according to Freedom House, an American organisation that monitors political and civil rights in the world. The "not free" countries includes the Soviet eastern bloc, Pakistan, China, Afghanistan, Iraq and several African nations. Freedom House said 1984 had been a good year for freedom in most countries, based on the degree to which fair and competitive elections occur, industrial and group freedoms, are guaranteed in practice and press freedom exists. Pakistan got a rating of seven for political rights and five for civil rights, while Sri Lanka and Bangladesh were designated "partly free".

DIED

John B. Higgins, 45, an internationally acclaimed singer of South Indian classical (Carnatic) music, was killed on Dec 7 in Middletown, Connecticut, after being struck by a hit-and-run driver. Higgins was named Director of the Wesleyan University's centre for the arts in 1968 after achieving prominence in India as the first known westerner to master the difficult art of singing Carnatic music.

Anoka Mehta, 73, former Union Minister and economist, on Dec 10 in New Delhi, of chronic respiratory and cardiac disease.

Vicente Aleixandre, 86, Spanish poet who won the 1977 Nobel Prize for Literature, on Dec 14 in Madrid, of intestinal haemorrhage.

Frank Spedding, 73, the Canadian-born scientist who developed the processing of uranium for the first atomic bomb, in Ames (Iowa, USA).

Sam Peckinpah, 59, Director of movies like *The Wild Bunch* and *Straw Dogs*, who earned a reputation as an unorthodox director, for introducing a new level of violence in films, on Dec 28 in Oglewood, California.

Isaak Kiokin, 76, a prominent physician who helped develop the Soviet atom bomb, on Dec 28 in Moscow.

Marshal Dmitri Fedorovich Ustinov, 76, Soviet Defence Minister and senior member of the politburo of the Soviet Communist Party, on Dec 20, after a long illness. Ustinov was closely connected with Soviet defence affairs for almost four decades. He was overlord of the Soviet military for the last eight years.

Dharamvir, 49, Union Minister of State for Labour and Rehabilitation, on Dec 22 in New Delhi's All India Institute of Medical Sciences, where he lay in coma for 10 days following cerebral haemorrhage.

ELECTIONS '84

(Continued from page 13)

ceed in achieving the colossal mandate which her death obtained for her party.

And while establishing the undoubted supremacy and popularity of the Congress(I) the elections have also established the Opposition as a non-entity. The democracy has, at this stage, no Opposition worth the name. The magnitude of this can be measured by some rather revealing statistics. Of the 220 seats the Bharatiya Janata Party (BJP) contested for, it managed to secure only two. The Janata Party fielded 208 candidates winning only 10 seats while the same party was responsible for dislodging the ruling party from power in 1977 when it had won 281 of the 504 seats. Charan Singh's trump card, the Dalit Mazdoor Kisan Party (DMKP) did not turn out to be the ace he had expected. The only national opposition party which managed to save face to some extent was the Communist Party of India (Marxist). It managed to stem the country-wide Congress(I) tide in West Bengal though it wasn't successful in Kerala and bagged 22 seats overall. The highlight of the elections has surprisingly turned out to be the emergence of regional parties as major opposition forces. The N.T. Rama Rao-led Telegu Desam made an impressive showing bagging 28 of the 42 seats in Andhra Pradesh. But perhaps this victory can be attributed to NTR's personal charisma and loyalty he commands from the masses. Whether the party would have been able to put up a fitting battle in his absence is now a rhetorical question.

The AIADMK also did exceptionally well from Tamil Nadu. For the third consecutive time the party has won an absolute majority in the Tamil Nadu Assembly. In the Lok Sabha elections the AIADMK-Congress(I) alliance has performed the spectacular feat of winning 37 of the 38 seats. The alliance has won in every constituency it contested from, individually—the AIADMK bagging 12 seats and the Congress(I), 25. In the Assembly elections held simultaneously the AIADMK touched an all time high by securing 133 of the 232 seats. In Kashmir the Farooq Abdullah led National Conference(F) also fared better than the Congress(I) capturing 3 of the 5 seats contested; the ruling party could bag only 2.

Overall then, the Opposition's dismal eclipse from Indian politics can primarily be attributed to their futile internal squabbles and unsuccessful bids at unity, all of which boomeranged on them. The exit of the main Opposition stalwarts, prominent among them being Atal Behari Vajpayee (BJP), Ram Jethmalani (BJP), H.N. Bahuguna (DMKP), Devi Lal (DMKP), Karpuri Thakur (DMKP), has left the Opposition floundering and rudderless, rather like ships without captains or crew. Even in Karnataka, once a Janata stronghold, the Janata managed to retain only 4 seats of the 28, 23 of them going to the Congress(I). This compelled C.M. Ramakrishna Hegde to tender his resignation and he now heads a caretaker government till the commencement of the Assembly elections. It can now only be hoped, for the welfare of the Indian democracy, that the Opposition fares better next time.

Now that the verdict has been delivered categorically and comprehensively in favour of Rajiv Gandhi and Congress(I) it is upto them to live up to the expectations of the people and rise up to the challenges and tasks ahead. Success should not go to their heads and laxity should not be allowed to seep into the ranks. For, the mere winning of elections is not sufficient. What is needed is evidence to prove their credibility and capability for future times to come. The Indian masses have time and again demonstrated that those who do not come up to their expectations are not given another chance to make amends as was evident both in 1977 and 1980. If the new government provides the stability, unity and security the people are so desirous of, it will add to its popularity, and if not then it will be voted out of office without the slightest hesitation. And while going about its tasks the government should give due thought to the economy as well and convert it from a scarce to a surplus economy—a stable economy, being a pre-requisite for future growth and development. The Opposition should also learn its lessons from its numerous mistakes and make amends. For, the Opposition is as important to a democracy—an inherent safety valve and corrective instrument which prevents the ruling party from becoming too powerful to commit follies and get away scot free. The need of the hour is a strong, efficient Centre and a substantial Opposition as well. The country has been handed over. It can only be hoped that it is in capable hands.

SPORTS

ATHLETICS

Asha Aggarwal, the best long-distance runner from India among women, finished third at the Singapore Marathon on Dec 9, clocking 2:45:40.0. The second-placed Evy Palm (Sweden) also clocked the same time but just managed to pip Asha at the tape. Christie Jakobson of Denmark was the winner. Among the men, Tommy Persson (Sweden) beat the 10,000 strong field to win, ahead of two Belgians, Jose Revigin and J. Gremont.

BADMINTON

The Pro-Kannex Grand Prix finals ended in Kuala Lumpur on Dec 16. This tournament is held as the grand finale after a series of about 16 tournaments held during the year in which points are awarded. The top 12 men and top eight women participate, divided into four groups of three and two groups of four, respectively. The men's final was deservedly won by Morten Frost Hansen of Denmark, who knocked out Liem Swie King of Indonesia 15-5, 15-4. The women's final as expected was won by Han Ai-Ping of China who defeated Ivanna Lie-Ing Hoa of Indonesia 11-3, 11-2.

BOXING

The 31st National Championships held in Calcutta, on Dec 16 were dominated by the Services as they won 10 of the 12 titles.

Results:

Light-fly: Lok Bahadur Gurung b D. Gurumurthy (Steels); **Fly:** G. Kamble b H. Mahida (Rlys); **Bantam:** C. Shanmugham b P. Subramani (Rlys); **Feather:** S. Nityanandan b S. Choudhary (Haryana); **Light:** M. Xavier b D. Mathivanan (Rlys); **Light-welter:** S. Jayaram b Jawahar Ali (Rlys); **Welter:** Gopal Dewang b S. Gupta (Rlys); **Light-middle:** M.P. Singh b A. Khan (Rlys); **Middle:** K. Satyanarayana b R. Bhardwaj (Rlys); **Light-heavy:** Palwinder Singh (Rlys) b C. Gurung (Ser); **Heavy:** Mukhtiar Singh b P.C. Bhaskar Sen (Rlys); **Super-heavy:** Jaipal Singh (Punjab) b N.B. Thapa (Ser).

S. Nityanandan was adjudged 'best boxer'.

CHESS

At the World Chess Olympiad, USSR won both the men's and women's sections easily. After the 14th and final round at Salonika (Greece) on Dec 5, in the men's section, England won the silver medal by defeating Philippines, while USA had to be content with the bronze, as they could not beat Bulgaria. In the women's section, Bulgaria took the second position and Romania the third. Indian men came a miserable 33rd and the women 15th.

CRICKET

The wheel turned full circle, when, on Dec 3, India won the First Test against England at Bombay, by eight wickets. The last occasion when India won a Test match was in the 1981-82 season at the same venue against the same team. The hero this time was a young 18-year-old Laxman Sivaramakrishnan, who bagged six wickets in each innings. The final scores:



England (1st innings)—195, India (465 for 8 dec); England (2nd innings)—317, India (51 for 2). Thus India won after three years and 31 Tests of wilderness. The 235-run partnership between Ravi Shastri and Syed Kirmani eclipsed India's seventh-wicket stand against all countries. The earlier record was 186 runs between Eknath Solkar and Dilip Sardesai against West Indies at Bridgetown in 1971.

★ ★ ★

The first one-day international between India and England at Pune on Dec 5 ended in victory for the men from 'Old Blighty' by four wickets.

★ ★ ★

West Indies beat the Aussies in the Third Test in Adelaide on Dec 11 by 191 runs. Thus the five-Test series is already with the Windies, who having won the first two Tests have secured their first-ever series win on Australian soil. But in the Fifth Test in Sydney on Jan 3, West Indies suffered their first cricket defeat in 28 Tests when they went down by an innings and 55 runs to a rejuvenated Australian team.

It was a sad ending for skipper Clive Lloyd, playing his last Test, after leading the West Indies in over 100 Test matches. He was given a standing ovation by the Sydney crowd after scoring a defiant 72 runs in an attempt to stave off defeat on a crumbling wicket.

★ ★ ★

The Third and final Test between New Zealand and Pakistan ended in a draw in Karachi on Dec 15. With this draw, Pakistan have won the series 2-0. Stephen Bock (New Zealand) and Iqbal Qasim (Pakistan) were voted 'Men of the Series'.

In a Test match of fluctuating fortunes, the Second Test at Ferozshah Kotla in New Delhi ended on Dec 17, in an eight-wicket win for

Henrik Sundström (above): Upsetting McEnroe? Stefan Edberg: Dramatic doubles display at Goteborg, Sweden, in Davis Cup final.

England.

With a first innings arrears of 111 runs, India started its second innings cautiously and were safely placed at 128 for 2, going into the final day. They, however, succumbed to 235. England, left to score 125 runs in 60 minutes and 20 mandatory overs, accomplished the task with eight overs to spare.

This sensational twist in the turn of events levelled the series one-all with three more to play. And even more sensational was the announcement by the selectors after the match that Kapil Dev, India's ex-captain and one of the best all-rounders in the world, had been dropped from the team for "indiscipline"—ostensibly for the "rash stroke" he played to get out at a crucial stage in the match. Later, the Board of Control for Cricket in India (BCCI), pointed out that only the BCCI could censure players for indiscipline, and that it was beyond the jurisdiction of the selection committee. Sure enough, the selectors withdrew their statement and said that Kapil was dropped on "cricketing grounds". But, the man who seems to be behind this sorry state of affairs, captain Sunil Gavaskar, is keeping his customary "no comment" face. He is reported to have said, "I don't want Kapil."

FOOTBALL

The Asian Cup for football was won by Saudi Arabia when they defeated China 2-0 in the final at Singapore on Dec 16. Shaye Al-Nafisah scored in the 11th minute to give the Saudis the

their Captain Majed Mohammed scored with a brilliant shot. Defending champions Kuwait beat Iran 5-4 on a penalty-kick shoot-out, after a 1-1 draw, to finish third.

★ ★ ★

The Liaoning Football Club of China made their DCM Trophy debut a memorable one by winning the cup with a deserving one-nil victory over the Soccer Federation of Western Australia, in the final at Ambedkar Stadium in New Delhi on Dec 21.

HOCKEY

The Jawaharlal Nehru Tournament in New Delhi was won by the crack Indian Airlines (IA) team, when they defeated Border Security Force (BSF) by three goals to two in the final on Dec 11.

The start of the match was electric, as only in the third minute, Virender Bahadur (IA) entangled his stick with Bhengra's (BSF) in the 'D' and Kuljit converted the resultant penalty stroke to give BSF the lead. This was maintained till the 19th minute, when Vineet Kumar Sharma converted the second penalty corner to come the Airlines way. Only nine minutes later Mervyn Fernandes converted a penalty stroke to give IA the lead into the second half. The celebrated forward line of IA—Gurcharan, Tikken, Mohd. Naeem, Fernandes and Zafar Iqbal—now came into its own, and had it not been for Tajinder Singh of BSF, the scoreline would have read like a tennis score. In the 46th minute, Sharma did not take a direct hit off a penalty corner, but passed to Gurcharan in the centre, who in turn tapped to Tikken waiting unmarked on the right, who made no mistake. BSF got a consolation goal, as Baldev Singh scored off a penalty corner, two minutes before the end.

★ ★ ★

The Sixth Champions Trophy Tournament ended in Karachi on Dec 14 in victory for the defending champions Australia, despite the fact that five of their stalwarts, including Rick Charlesworth, were not in the team.

It was a six-nation tournament played on league basis, with the last match between hosts Pakistan and Australia being as good as the final. The World and Olympic Champions were absolutely off-colour, they just could not combine and the young Aussies played to a plan, with quick passing. They took an early lead as Warren Birmingham, who was unmarked, received a quick pass from Terry Walsh, and scored. The winning goal of the 2-0 win was scored when Michael Nobbs took the penalty corner hit in place of the usual Craig Davis, and cleanly deflected towards Nigel Patmore who put the ball in the back of the net, from point blank distance.

The '81 and '82 champions, Holland finished fourth here, as Great Britain, the surprise team of 1984, beat them 3-1 to finish third. New Zealand finished fifth and Spain took the wooden spoon. India and W. Germany did not participate. Perth in Australia will be the venue for the 1985 tournament to be held in November.

TABLE TENNIS

The Asian Cup Championship ended in New Delhi on Dec 23 with China winning the finals in both the sections. The results:

Men: Fan Zhen b Cai Zhen Hua 21-15, 19-21, 21-14, 21-18.

Women: Tong Ling b Ni Xiaolan 19-21, 21-12, 21-15, 21-15.

The top-seeded Indians were Kamlesh Mehta (10th) and Indu Puri (5th) in the two sections.

TENNIS

The 1984 Davis Cup final between the US and Sweden, which began on Dec 17 at Goteborg in Sweden, turned out to be a classic final with five of the top seven in the world on display.

Mats Wilander (Sweden), playing brilliantly, outclassed Jimmy Connors 6-1, 6-3, 6-3 in the opening encounter. In the second match of the rubber, Henrik Sundstrom created a major upset as he knocked the wind out of the world No. 1 John McEnroe, winning 13-11, 6-4, 6-3.

In the doubles, Stefan Edberg and Anders Jarryd defeated McEnroe and Peter Fleming 7-5, 5-7, 6-2, 7-5.

McEnroe was able to regain lost pride as he defeated Wilander 6-3, 5-7, 6-3 in the first reverse singles. But Sundstrom made the tie 4-1 as he beat Jimmy Arias 3-6, 8-6, 6-3.

AWARDS

The sports writers of the Associated Press in Europe voted for the Best Sportsman and Sportswoman of the year 1984 and for the second year running Carl Lewis and Martina Navratilova emerged as winners.

SANJEEV GUPTA

Michael Ferreira: Championship hat-tricked at Bangalore billiards!



INDIAN SPORTS '84 HIGHS AND LOWS

Snooker: Om Agarwal beat Terry Parson in the final of the World Amateur Snooker Tournament in Dublin to win the World Amateur Snooker Title. This was the first time in almost a quarter of a century that the trophy, donated by India, had been spirited away from the British Isles.

Billiards: Michael Ferreira is the reigning and three times World Billiards Champion.

Tennis: Ramesh Krishnan moved upto 23rd place on the Association of Tennis Professionals computer ranking. Vijay Amrithaj too returned near the top 20 after a long time. India lost the Davis Cup encounter to France in New Delhi before the first ball was served. Vijay being unfit did not play.

Badminton: Indian ace Prakash Padukone lingered amongst the top 10 but injuries kept him away from the top-three bracket. India organised the zonal Thomas and Uber cups but once again performed well below expectations.

Cricket: India changed their cricket captain from Kapil Dev to Sunil Gavaskar on account of the former being unfit for the Asia Cup match at Sharjah, UAE. Gavaskar emerged victorious and returned to lead the team for the five one-day internationals against Australia and the tour of Pakistan. India suffered defeat in three of the five one-day internationals while two were abandoned. The Indians managed to draw two Tests in Pakistan though they were outplayed and lost a one-day international while the other was abandoned. At home, India won their First Test against England, but lost the one-day international and the Second Test. This led to Kapil Dev and Sandip Patil being axed from the squad.

1984 Olympics, Los Angeles: India's hurdle queen P.T. Usha faced a major hurdle with the clock when she learnt that she had lost the bronze medal by 1/100th of a second. The Indian hockey team, gold medal winners of the 1980 Moscow Games, finished fifth and failed to enter the semi-finals. The wrestling and shooting squads were neck deep in controversy and accordingly their performance suffered. The marksmen put up the worst ever show by Indian sportsmen in the Olympics. A weightlifter had to be packed home as he was found to be over weight.

South Asian Games, Kathmandu: The South Asian Games in Kathmandu which cost Nepal \$4.4m to host, came as a quick reverse for the flop at Los Angeles. Indian swimmers—Bula Chowdhry, Wilson Cherian, Anita Sood, Persis Madan and Khajan Singh struck gold. Khajan Singh won eight of the 22 gold medals. Indian boxers, athletes and weight-lifters also did well against moderate opposition.

Football: The Nehru Cup was won by Poland with one-to-nil victory over China in the final. The Asian Cup was won by Saudi Arabia who shocked China in Singapore. India scored a fine two goals-to-one-victory over Malaysia and made a trip to Singapore where a "betting plot" was unearthed against China. Despite the brilliant goal-keeping of Atanu Bhattacharya, which saw India hold Iran to a draw, India never had a chance of qualifying for the semi-finals.

PARSHANATH CHATTERJEE

NORTH-SOUTH DIALOGUE

BY J. V. ARUN KUMAR

C.S. Pandit, Special Correspondent, *Amrita Bazar Patrika* spoke on the 'North-South Dialogue' at the CCTimes lecture series held recently in Kirori Mal College, Delhi. A summing up:

The North-South Dialogue represents the problems of countries like India, in a world dominated by a handful of rich countries endeavouring to corner benefits of all kinds and going from strength to strength. It is a forum that provides an opportunity for poor countries to be assertive and make demands in order to alleviate their miseries.

A beginning in this direction was made immediately after World War II, when the reconstruction of the war-shattered economies was aided by the "only unaffected country"—the United States. The aid, under the 'Marshall Plan', enabled the affected countries to speed up their rebuilding operations. As a result, today, these countries have become rich, dominating the world scene and dictating their terms to the underdeveloped world. A new neo-colonialism is thus emerging, crushing the Third World countries and the newly independent countries in Asia and Africa. It is now evident that political freedom is meaningless without real economic power.

The terms 'North' and 'South' are not precise in terms of geographical classification. In fact the forum has been christened North-South dialogue mainly to reflect the peculiar trade relationship between countries where North and South are broadly synonymous with advanced capitalist countries and developing countries, respectively. There is a set of countries, forming the South which specialise in producing raw materials; the other set of countries, the North, buy these raw materials cheap, and sell the final products to the South, at very high rates. The South thus receives low prices for their export of raw materials, whereas the final export products are made available to them at exorbitant rates, creating enormous trade problems. The North-South dialogue is an attempt to reduce the miseries of the South by helping them to negotiate with the North to relent and help them.

It was the oil crunch of the '70s which shook the rich nations and made them bow to the combined strength of the Gulf. The latter formed a cartel, the OPEC and demonstrated how they could get a better price for oil, and turn the terms of trade in their favour. This can be considered as the

beginning of the New International Economic Order (NIEO), which meant judicious, equitable and a just economic order—all vaguely defined.

This injection of prosperity in the countries relying on exports was short-lived. The inner capacities of these economies could not be developed and economic development could not be sustained as they failed to develop an indigenous base for science and technology. At a time when prospects of aid are falling, the Third World countries have to develop perforce, a strong technological base. This becomes all the more important because the poor countries are unable to borrow from the market to promote development.

The idea of the North-South dialogue germinated with the coming up of the UN and its subsidiary agencies. The entire UN, however, is concerned more with the problems of the rich, to the detriment of the Third World countries. Even ECOSOC, a subsidiary agency of the UN, is making more efforts to deal with the problems of the rich nations of the West. ECOSOC deals with esoteric concepts like human rights when millions of people in Asia and Africa are starving and leading a miserable existence. Thus the feeling of being ignored by a world agency like the UN led to the demand for a forum to discuss the trade and development problems of the poor.

The United Nations Conference on Trade and Development (UNCTAD) can be called the beginning of the North-South dialogue. At the first UNCTAD meet, there was an open confrontation between the underdeveloped countries and the rich nations. The conference, of course, provided an opportunity to the "poor" to assess their combined strength and articulate their demands.

At their second conference in 1971, the entire question of percentages of aid to the developing countries was discussed and the principle of general preferential system initiated. The salient feature of UNCTAD-III was the focus on monetary reforms. The "poor" once again reached an agreement on this point and demanded monetary reforms. Their problems emanated from the fact that their raw materials were going cheap but their purchase of goods entailed heavy payments. The high interest rates prevailing in the open market prevented them from obtaining loans and hence the high dependence on aid from the UN. The demand for monetary reforms came up in the wake of

violent fluctuation of currencies, leading to devaluation, or upvaluing of currencies. The instability of the Third World currencies made them more vulnerable to the rich.

The oil crisis made the rich nations wiser and it became quite evident that by forming cartels, the "poor" can bargain better for their raw materials. This realisation was the basis of a suggestion for the creation of a 'buffer' which could prevent fluctuations in prices of products of the Third World. This was, in fact, the theme of UNCTAD-IV. But a conspicuous exclusion from this 'buffer' suggestion was oil, which meant that the rich countries were keen to get benefits from the oil glut in the market in terms of crash in prices, as it suited them.

The treaty for the creation of the 'buffer' was to be ratified by 90 countries of the group. However, the treaty remains ineffective by and large, and the Third World countries' products are still facing wide price fluctuations. In 1976, once again, global negotiations were started in right earnest but the concept remained vague.

The Cancun Summit at Mexico, promised much for global negotiations but failed to attain much.

Later, monetary institutions like the International Monetary Fund (IMF) and the World Bank tightened the screw on loans. With aid prospects remaining dim and commercial markets almost inaccessible, owing to high interest rates, the Third World is in a quandary. The Group of 77, the economic wing of the non-aligned nations, views these developments as attempts by rich nations to increase the number of conforming countries due to the pressures such a move entails. The countries which toe their line receive maximum benefits in terms of aid, military assistance etc. Thus, the instrument which can promote economic development in poor countries is being utilised for pressuring the countries at the political level.

Under such circumstances, the Third World countries are pressing for monetary and financial reforms. The NAM summit in New Delhi agreed on the need for an international conference on money and finance, with proper representation from all over the world. Interestingly, the Soviet bloc countries, presently, do not have any role in these institutions.

The pressure further mounted on the Third World countries, with recession in the West and the subsequent "protective walls" hampering trade prospects for the poor. To get over this problem, the concept of South-South cooperation is being promoted but is still on a very low key. The future is not very promising for the North-South dialogue and it seems quite obvious that only those countries which will be subservient to rich nations will corner all assistance from the western countries. ■

Evaluating The US Dollar

BY K.N. PANDEY

The soaring value of the American dollar has baffled monetary theorists all over the world and has generated intense controversy in the US itself. In terms of the major currencies of America's other trading partners, the dollar is over-valued by about 34%. Indian currency has depreciated from Rs 8.75 per dollar to Rs 12.01 per dollar, a drop of about 45%. That the dollar is the most sought after acceptable currency can be seen by the fact that the businessmen in England and France want all payments to be made in dollars and are shying away from their own currencies.

The US is running record trade deficits: \$36b in 1982, nearly twice as much in 1983 (\$65b), and as much as \$110b projected for 1984. Under such circumstances the US dollar should have fallen in value so as to restore the balance in merchandise trade. However, instead of weakening, the dollar is gaining strength day by day. This is a unique phenomenon in the world of monetary economics.

The fixed exchange rate system, established at Bretton Woods in 1948, came to an end in 1973. Dollar convertibility was suspended. Freed from its moorings to gold, the dollar see-sawed for a few years, mainly in the downward direction. But, especially in the last five years, it has steadily moved up in relation to all other currencies.

Some economists attribute the upward swing to the "dirty float" system now in operation, which ensures two things—first, changes in economic variables in one part of the world will have repercussions, via trade and capital movements, on the rest of the world and second, importers and exporters will have to pay greater attention to movements of currencies in determining their trade and investment decisions.

It is in this setting that countries, especially of the European Economic Community (EEC), are crying, almost in one chorus, for an end to the high priced dollar sustained by a massive inflow of capital induced by very high interest rates. The culprit, it is claimed, is the US, which, with its high interest rates and budget deficits, is causing serious problems not merely to Third World countries but also to the developed countries.

According to the conventional economic theory a high balance of payments deficit implies an over-valued

currency. Massive deficits should have weakened the dollar leading to its collapse. But this has not happened. Instead the US economy is booming as never before.

This is based on the inter-relationship between the budget deficit and high interest rates. Unwilling to finance the deficit (by allowing money supply to increase) the Federal Reserve has raised interest rates. The high rates have in turn led to an inflow of international portfolio capital and reduced outflow from the US. This surplus on capital account is what is sustaining the current account deficit—in essence President Ronald Reagan is financing his annual military budget of \$200b by borrowing from other countries.

Conventional economic theory fails on another account. According to it, an increase in government expenditure financed by borrowing will lead to a rise in interest rates and a "crowding out" of private investment; producers would shelve some projects while consumers would reduce purchase of durables which are bought mainly on credit. The fact is that economic theory has always neglected the income distribution effects of an increase in interest rates. The 2% increase in interest rates in the US has led to a \$24b increase in consumer savings held in the so-called "money market" funds.

Intense competition for funds among banks has led to consumers getting higher returns on their savings, a development which has been facilitated by the relaxation of certain rules. The end result has been, increased consumer expenditure which further strengthens the dollar. Firms too have benefited. The generous fiscal incentives for investment enacted in the 1981 Tax

Act have offset rising interest costs.

Finally, withholding tax requirements for foreign investments has resulted in the net real return on investment in the US being among the highest in the world. Hence, there has been sustained inflow of capital from overseas markets to the US. Not surprisingly, foreign investment has increased from \$4.6b in 1979 to \$26b in 1984.

This has led to the very high real rates of return on US corporate capital. If one compares the present US inflation rate of about 5% with 11% to 10% in Europe, the real return in the US today would be highest in the world. Given the weaknesses of other developed economies (barring Japan) this picture is unlikely to change in a hurry.

One most unfortunate side-effect of the strong dollar is the increased protection it has fostered in the US, leading to an overall reduction in world trade. A strong dollar implies reduced American exports and increased imports. The latter leads to demand by American producers for import restrictions. The US is a major market for exports from developing countries, and protectionism there, would create import and debt repayment problems for developing countries.

The principal avenue by which a rising dollar can affect Indian economy adversely is by an increase in import prices. This is especially important in the context of the current policy of import liberalisation which has as its objective the import of new technology, machinery and vegetable oils. If planned well, the ascending dollar rate cannot much affect such transactions. It is thus, too much to say that project costs are severely affected by the changing value of the dollar.

On the other hand, the export effort has received a tremendous fillip in recent years. The steep decline in their dollar value has made Indian exports highly competitive in world markets. Thus, exports of readymade garments increased by 21% during 1983-84. Thanks to the soaring dollar, our balance of trade with the US has moved in surplus. India has more to gain through increased exports than to lose from the rising dollar. Her external debt burden unlike many developing countries is not difficult to service. It may thus not be too much to say that the booming dollar has been a blessing in disguise for India. ■

SENSING REMOTELY

The first remote sensing satellite is expected to be launched by Europe in 1989. The £ 325m project will provide global wind and wave information to offshore industries, shipping and those involved in oceanographic, fishing and other maritime operations. It will complement the US Landsat satellites which have been observing the earth and supplying data and pictures since 1972 including information about crop production, availability of water and location of minerals. Thirteen member states of the European Space Agency are expected to be involved in the project.

JIPMER PG Course

Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER) invites applications on prescribed forms for admission to the post-graduate degree and diploma course for the session commencing from April 1985, under the University of Madras.

Application forms and prospectus pertaining to the eligibility requirements can be had from the office of the Director, JIPMER, Pondicherry-605 006 on payment of Rs 3 by money order.

The last date for receipt of filled in application forms is 1.2.85. For further details, see *Employment News* dated 29.12.84.

Master Of Computer Applications Course

The Department of Computer Science University of Delhi will conduct a three-year postgraduate degree course in Master of Computer Applications (MCA). The admission test will be conducted

on 17.2.85. Minimum qualifications: bachelor's or master's degree in Science, Engineering, Mathematics, Statistics, Economics or Commerce. Age limit: 20 years before 1.10.85.

Application forms may be obtained by post on payment of Rs 3 by crossed IPO, payable to the Registrar, University of Delhi, Delhi, alongwith a self-addressed stamped envelope (10"X7") affixed with Rs 1.30 postage stamps. Last date for receipt of completed application forms is 31.1.85.

Direct Entry Artificer, Indian Navy

Here is a chance for you to join the Indian Navy as a Direct Entry Artificer, if you are an unmarried male citizen of India, born between 16.3.63 and 15.3.67, and possess a diploma in Mechanical, Aeronautical, Electrical, Radio Engineering, Internal Combustion Engineering, Electronics, Telecommunications or Instrumentation

Engineering from institutes recognised by the Government of India for recruitment to subordinate services.

For application forms and other details see *Employment News* dated 5.1.85.

Sub-Inspector (Executive), CISF

Applications are invited from male Indian citizens for the posts of Sub-Inspector (Executive) in the Central Industrial Security Force (CISF).

Educational qualifications: a bachelor's degree of a recognised university. Proficiency in games, sports and athletics and membership of National Cadet Corps desirable. Age limit: not below 19 years and above 25 as on 1.1.85.

Selection will consist of physical efficiency tests: those who qualify in this will have to appear in a written test consisting of a paper in General Knowledge and Essay Writing. For the format of the application, see *Employment News* dated 5.1.85. The last date for receipt of applications is 9.2.85. ■

Answers to TEST YOUR WORD POWER

1. **acrid:** B: deeply or violently bitter, sharp, acrimonious. Hindu-Muslim marriages have provoked acrid passion and communal antagonism in the past and still do.
2. **aquatic:** B: living in or near water, as fish, whales, ducks, etc. Water pollution severely affects aquatic life.
3. **asylum:** C: protection from persecution, given especially to political refugees by a nation; place of refuge or safety. We in India are not so naive as not to know that Britain is a free society and that it values its tradition of providing asylum to political refugees.
4. **auspices:** A: patronage; helped and favoured by. The International Conference on the Reagan Administration's Foreign Policy was convened in Brussels from Sep 28-30, 1984 under the auspices of the International Progress Organisation.
5. **cinders:** C: ashes; remains of burnt coal. Each superpower has, over the years, accumulated sufficient nuclear weapons to reduce the other to cinders.
6. **emblem:** A: symbol, device that represents something, e.g., a dove badge. For centuries an inspiration to poets and artists, the Japanese crane has so captured the imagination of the Japanese people that, with the sun and chrysanthemum, it has become a national emblem.
7. **founder:** A: to stumble, fall; collapse. The new Labour Government of David Lange is trying to throw a life-line to an economy that foundered during the nine-year tenure of the previous Prime Minister, Sir Robert Muldoon of the National Party.
8. **gourmet:** C: person expert in the choice of wine and food. Gourmets are very particular about food and wine.
9. **halcyon:** D: prosperous; affluent; golden; calm and peaceful; joyful. The value of world trade is growing in real terms in the industrialised countries for the first time since the halcyon days of the 1970s.
10. **hooch:** C: alcoholic liquor, especially when inferior or illicitly made. The latest craze in Japanese bars is a hooch (shochu) which looks like petrol, is made from barley and is mixed with lemon soda.
11. **lethal:** B: deadly; causing death. The discovery that people exposed to cowpox gained immunity to human smallpox led to the first vaccine against a lethal disease.
12. **mystic:** B: one who seeks direct communication or union with God by self-surrender. Founded by a 15th century mystic, Nanak, as a monotheistic blend of Hinduism and Islam, Sikhism emphasises morality and good deeds.
13. **penal:** C: connected with punishment. The penal code includes harsh punishment for kidnapping.
14. **propagate:** A: to spread from person to person, as a doctrine or belief. When the Sikh extremists are in Britain, it is London's obligation to ensure that they do not propagate, finance and assist terrorism.
15. **pupil:** B: person being taught; student. By 1947, when the country finally won independence, Gandhi had hand-picked his superstar pupil, Jawaharlal, to become the nation's first Prime Minister.
16. **retinue:** B: group of persons attending a person of rank. Reagan aides estimated that it cost an extra \$20,000 to \$40,000 a night just to house the presidential retinue for the Reagan campaign.
17. **rigours:** D: severe conditions; harshness; strictness. Britain's businessmen, never fully converted to the rigours of Mrs Thatcher's economic regime, are beginning to grumble more audibly.
18. **trickle:** D: weak or thin flow. The flow of labour between countries is a trickle when measured against the flood of people who leave their villages to seek a living in the cities.
19. **yarn:** B: story; a narrative of adventures, especially a tall tale; also fibres which have been spun for knitting, weaving, etc. A World War III yarn (in which the American heartland is invaded by Russian, Cuban and Nicaraguan forces), *Red Dawn* is the most controversial and vilified Hollywood film of 1984.
20. **yield:** A: to produce; give forth. Even if another hectare was never cultivated in Africa, its fertile soil is capable of producing about 10 times what it yields today.

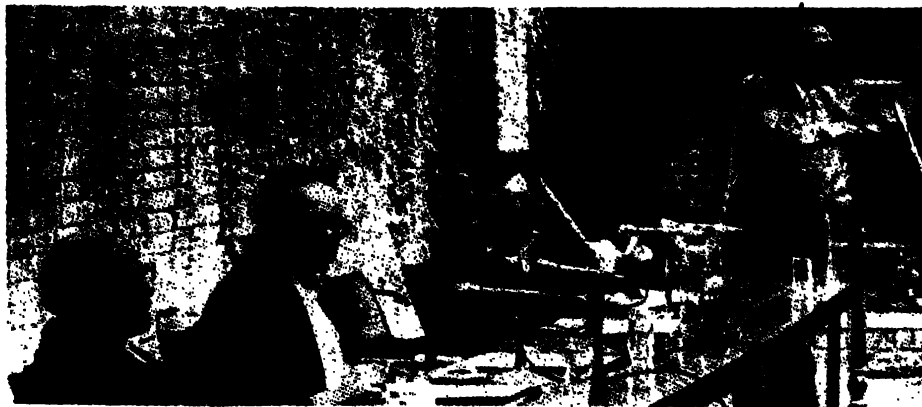
Vocabulary Ratings:

20-18 correct	exceptional
17-15 correct	excellent
14-12 correct	good

CCTimes Symposium

Religion And Politics In India

BY SANJUKTA BANERJEE



A symposium, jointly sponsored by the Student's Union of Gargi College, Delhi University and the Career & Competition Times was held on Dec 20 at Gargi College. The topic for discussion is of current interest to everybody, especially the student body, if one can go by the audience turn-out and participation. An attempt was made to thrash out the underlying aspects of 'Religion and Politics in India'. The speakers were Dr C.P. Bhambhri, Dean, School of Social Science, Jawaharlal Nehru University, Khushwant Singh, journalist, Dr Mushir ul Hasan, Professor of History, Jamia Milia University and Dr Ashwani K. Ray, Chairman, Centre for Political Studies, Jawaharlal Nehru University.

TOI Executive Director, Ramesh Chandra inaugurates as the three main speakers (left to right) Dr Ashwani Ray, Dr Mushir ul Hasan and Khushwant Singh look on.

The Executive Director of the Times of India Group of Publications, Ramesh Chandra, set the mood for the symposium with his opening remarks. Drawing on history, he said that when Aurangzeb made a statement that Islam was the only pure religion, Guru Teghbadhur said that all religions are pure, and what matters are noble deeds. Ramesh Chandra added that basically there were no problems; these arose only when there was a violation of the Constitution.

The symposium began with Dr Ashwani Ray, making some interesting comments on the place of religion in politics. He said, the nexus of religion and politics was a social reality at any point of time, and society was never really given a choice about deciding on this nexus. The goal of politics is accumulation of power and the means of achieving it, is religion. There is, therefore, a symbiotic relationship between the two having both progressive and retrogressive potentials. The potential, itself, depends on two important questions: first, which is the primary force, religion or

politics, and second, which social group is using religion for what purpose? About the progressive role of religion in politics, Dr Ray said it plays an important part in liberating capitalism from clerical orthodoxy. It was in this way that Mao used Confucianism in China and Khomeini used Islam against the Shah. But, the retrogressive aspect is more pertinent e.g. the use of Islam by President Zia of Pakistan and of Islamic fundamentalism by Khomeini now. However, Dr Ray added that the nexus itself was neither progressive nor retrogressive.

About communal violence, he said that the erosion of moral and political legitimacy of any government leads to social and political violence and this, in a plural society, means communal violence. In fact, he felt that communal violence is closely related to the general level of social violence and where the level of conflict resolution (like the police and the bureaucracy) was weak, violence tended to increase. In the final analysis, conflict could be resolved only in a revolutionary situation which would provide the motivation for economic development and social transformation, and lead to the establishment of the primacy of politics over religion and all other social forces. In the short run, however, this kind of revolutionary solution is not possible; therefore the alternative was to give serious thought to the instruments of conflict resolution: the police, the judiciary, the press, the bureaucracy, etc which were equally significant in a democratic structure.

Khushwant Singh took a two-pronged approach to the problem, and he said that religion depended on three different kinds of

relationships: of man to his maker and destroyer, of man to his fellow human being and of man to himself. He expressed the view that there has been erosion in all three spheres, but more so in the first two. Scientists have tried to give the answers to questions like how the world began and what the future holds for us, and thus have interfered in man's relationship to God, which earlier was a total mystery. Law has taken over the second sphere, by specifying how man should deal with his fellow human beings. The third is the only sphere of religious practice now. Singh drew a line of distinction between the two bodies of religion, the Hebraic and the Hindu, and said that while the followers of the first (Christians, Muslims, Jews) emphasised man's relationship with his fellow beings, the second stressed his relationship to himself.

Coming to the Sikhs, Singh stated that like the other religions of the Hindu family, it's concern was not with doing *seva*. It took its theology from *Bhakti* and emphasised that salvation lay in the repetition of the *naam* for which reason it has also been called the *naam marg*. He said that the 'Khalsa Panth' which came later also did not emphasise man's relationship with other men. The five 'K's' of Sikhism had nothing to do with other men. The *rahat*—the code of conduct—too, was entirely personal. The only exception was the rule which stated that in warfare, Sikhs should not touch Muslim women, and this too was basically a moral and personal code. He further stated that a good Sikh was one who said his prayers regularly and went to gurdwaras. If a Sikh cheated, he was not considered a bad Sikh, but if he clipped his beard, he was certainly not a good Sikh.

According to him, the present change in Sikh religion has come about as a result of the divorce between ethical values and the practice of religion. The Bhindranwale phenomenon is the logical conclusion of this divorce between ethics and morality. Giving a very personal view, he stated that fundamentalism has taken root in Punjab only recently. To this end, entire cities and roads were renamed.

On politics, Khushwant Singh said that it was a system of administration only. Religion was a personal affair, and politicians had no right to display religiosity publicly. India, he said, was a secular state. This meant a respect for all religions and a clear cut distinction between the church and the state. The problem has arisen today because there is no such distinction. In a secular society, the state has no right to propagate religion, but the Indian governmental machinery inadvertently does so, by broadcasting religious music, etc, over its communication media. Finally, he added that the state should not patronise any institution that brainwashed children

(Continued on page 65)

BETTER ENGLISH

BASICS OF ENGLISH-2

BY RAGHU BHATNAGAR & RAJUL BHARGAVA

So far we have been discussing the grammar of the simple sentence. It is a basic type of sentence which is always a statement, affirmative, active, and which has only one main verb. In addition it has a fixed word order according to which the elements are arranged in the following sequences:

Subject—Verb—Object—Complement—
S V O C

Adverbial

A For proficient use of a language, however, one has to go beyond the simple sentence types. This is not a difficult thing to do because all non-simple or non-basic sentences are merely transformations of the basic types. All that, therefore, one has to do is to learn the ways of transforming basic into non-basic types of sentences.

We are first going to take up the most important transformations.

Statement into Question

For learning question transformation the knowledge of the following special verbs is important: *is, 'am, are, was, were, do, does, did, have, has, had, shall, should, will, would, can, could, may, might, must, dare (to), need (to), ought (to), used (to)*.

There are two main types of questions: *Wh*-questions (those which begin with words like *when, where, which, who, how*) and *yes-no* questions (those which can be answered either by saying *yes* or *no*).

The special verbs listed above are used for forming *Yes-No* questions. The word order of such a question requires that the special verb be placed first, followed by the subject and everything else afterwards:

Are you going to Delhi?

May we go now?

Has she written to you?

Do children dream like adults?

In the case of *Wh*-questions the *Wh*-word comes first. It is followed by the verb (the auxiliary verb, if there is one, comes first) and then by the subject. The subject-verb inversion is necessary in *Wh*-questions, except when the *Wh*-word itself is the subject:

Who broke the glass? (No inversion)

There is inversion in all other cases:

Which doors have you painted?

When will she return?

How did you do it?

Tag Questions

These are questions added to the end of a statement. They ask for confirmation of the

truth of the statement. If the statement is positive, the answer expected is 'Yes'. It is 'No' if the statement is negative.

The rules are usually observed in forming tag questions:

1. If the statement is positive, the tag question is negative, and vice versa.
2. If any one of the 24 special verbs occurs in the statement, it is repeated in the tag question. Otherwise, *do/does* or *did* is used.

Here are a few examples:

They were quarrelling, weren't they?

She teaches English, doesn't she?

They sold the house, didn't they?

He shouldn't sleep, should he?

They could not answer your question, could they?

It is becoming intolerable, isn't it?

He will come, won't he?

Affirmative into Negative

If the affirmative sentence has any one of the 24 special verbs, the negative is formed merely by the addition of *not* after the special verb:

They might refuse to answer.

They might not refuse to answer.

He will issue a public statement.

He will not issue a public statement.

We ought to help beggars.

We ought not to help beggars.

In the case of sentences having other than these special verbs *do/does* or *did* is used before *not*:

The police rescued the girl.

The police did not rescue the girl.

They like pop music.

They do not like pop music.

She teaches history.

She does not teach history.

Active into Passive

The structure of an active sentence is :
NP₁ + V + NP₂ (NP = Noun Phrase;
V = Verb)

The passive sentence has the following structure :

NP₂ + *be* + V *en* + by + NP₁

(*be* = the proper form of 'be', i.e. being, is, am, are, was, were; *en* = the past participle form of the verb)

Here is an example :

She wrote a letter (Active)

NP₁ V NP₂

A letter was written by her (Passive)

NP₂ *be* V *en* NP₁

The following points must be noted :

(a) In the passive construction NP₁ takes up the object position and therefore it must take the object form (*he, she, I, we, they* become *him, her, me, us*,

(b) The tense and number of the *be* form in the passive are decided according to the tense of the verb and the number of NP₂ in the active sentence.

Unless the mention of the agent represented by NP₁ is necessary, the 'by + NP₁' are not included in the passive sentence :

Someone has broken the window.
(Active)

NP₁ V NP₂
The window has been broken. (Passive)

NP₂ *be* + V *en*

It is wrong to think that active and passive constructions are interchangeable. It is the context and the situation which determine the use of one or the other.

More than one Main Verb

A sentence which has two or more main verbs is either complex or compound. Usually complex and compound sentences are formed with the help of conjunctions. A complex sentence has, besides the main clause, one or more subordinate clauses. A compound sentence has more than one independent clauses which are coordinate. While coordinate clauses are joined together by coordinate conjunctions (like *and, or, but*), the main clause and the subordinate clause are joined together by subordinate conjunctions (like *after, although, as, because, before, if, however, since, that, till, unless, until, while*).

Here are a few examples of complex and compound sentences :

Complex Sentences

Though she was ill, she came to the college.

He disappeared before I could talk to him.

She sent word that she was going to America.

There can be no compromise unless you radically change.

Compound Sentences

Sudha teaches history and Sheila teaches music.

You can go to a hill station or go to a bird sanctuary.

They played many tunes but did not get any applause.

Conditional Sentences

The usual structure of a conditional sentence is

if P then Q

It can take three forms depending upon the kind of condition sought to be stated :

1. If I go to Bombay I will meet the sheriff.

2. If I went to Bombay I would meet the sheriff.

3. If I had gone to Bombay I would have met the sheriff.

Sentences 1 and 2 refer to future time, 3 to past time. Sentence 1 states an 'open' condition. The condition has an almost 50-50 chance of being fulfilled. Sentence

an unreal or hypothetical condition. The speaker considers the possibility of the condition being fulfilled, remote. Sentence 3 states a rejected condition. It was just not fulfilled.

Indirect Speech

It is a style used to tell what somebody said without repeating the actual words. It is also called Reported Speech since someone reports someone else's or one's own speech :

A to B : I'm happy you've passed.

B to C : A said (that) he was happy I had passed.

: A told me (that) or he was happy I had passed.

Depending upon the purpose of the original speaker, the reporter can use verbs like *ask, request, suggest, advise, warn, order* in the indirect speech. Generally, in reporting past events demonstrative adjectives (this, these) and adverbs of time and place (now, here, etc) are changed into their related forms showing distance of reference, time and place (that, those) (then, there, etc). Further all personal pronouns (I, you, we etc) and possessives (my, yours, etc) are changed into their third person (he, she, they, his, her, hers, etc). Also if the reporting verb is

in the past tense, the verbs in the reported speech are also changed into their past tense forms :

A to B : I know I have failed.

B to C : A told me (that) he knew he had failed.

Reporting the two types of questions (*wh*- and *yes-no*) requires a somewhat different treatment :

A to B : Where do you live?

B to C : A asked me where I lived.

A to B : Are you a vegetarian?

B to C : A asked me if I was a vegetarian.

(The subject-verb inversion of the original questions is undone in the indirect speech.)

The most important thing to remember in changing Direct into Indirect Speech, however, is that *the changes effected are situational, not mechanical.*

Sentences Beginning with 'it'

One important non-basic type of sentence begins with *it*. There are three subtypes :

1. Sentences showing time, weather and distance :

(a) It is 7 o'clock.

(b) It is hot.

(c) It is 10 miles from here.

2. Certain sentences used in colloquial and informal English :

(a) It is true that she is charming (informal).

That she is charming is true. (formal)

(b) It is a mystery how she got that idea. (informal)

How she got that idea is a mystery. (formal)

(c) It is doubtful whether she will come tonight. (informal)

Whether she will come tonight is doubtful. (formal)

3. Sentences which have verbs like *happen, seem, appear* in them and which cannot begin with a *that*-clause.

It happened that she was not at home.

It seems that the train is late.

It appears that she is not a dancer.

Another non-basic type of sentence frequently used is the one beginning with *there*:

There is a book on the table.

There are some people in the room.

There are many Indians in Africa.

In such sentences the verb comes before the subject and the grammatical number of the former must be the same as that of the latter. ■

CCTIMES SYMPOSIUM

(Continued from page 63)

and religious education should not be given to children, since they were the politicians of tomorrow.

Prof Bhambhri spoke mainly on the roots of Hindu communalism. He said that initially the role of the intellectual elite had been important in establishing the relationship of man to his maker. But soon religions became mass-based and changes came in. Now, all religions are irrational. They are all centred around places of worship, and are based on scriptures, the interpretation of which are binding on all. All religions have created the feeling that theirs was the best religion. All religions contend against one another and no religion leaves anybody as a person in relation to his maker. In India, religion has become a public and not a private business. Since all religions thrive on preaching irrationality and have become so entrenched in society, it is important to fight the tyrannical role of religion, if one wishes to end the divisive tendencies in society.

The most important strategy, in this sphere, is to have a confederation of religions. This was tried during the nationalist movement, but the partition belied all hopes. We inherited a weak kind of secularism from the Western liberals. While our nationalist leaders were patriotic, they revived religious festivals as cultural festivals to bring about an "Indian"

resurgence and this was against the basics of confederal nationalism. Since the basic approach was wrong, post-independence India faced a multiplicity of communal (as opposed to secular) problems.

According to Dr C. P. Bhambhri, politics reflects society, and if the society is communal, then politics, too, is communal. Communalism leads to fascism and minority communalism responds to it. In the final analysis, he said that if religion is not weakened in society, the problem would not be resolved. In this connection, the use of the mass media, as well as the development of scientific thought, should be encouraged.

Speaking on Muslim communalism, **Dr Mushir ul Hasan** traced the roots of the problem and said that theoretically, Islam does not recognise the difference between temporal and spiritual affairs. In early times, the Caliph was the temporal as well as the spiritual head of Islam, and the *ulema* (Muslim clergy) were the guardians of Islamic law. Many of our present problems are however, a legacy of the nationalist leaders, who made many tactical mistakes. Symbols were drawn from the dominant religions which proved divisive. The demand for a separate Muslim homeland evolved from fears about the position Muslims would occupy in a "Hindu India". The British no doubt encouraged them in their fears, but at the same time, the heightened communal consciousness of the times weakened the secular character of the anti-imperialist struggle. The National Congress became susceptible to

religion and communal influences and developed links with the Arya Samaj type organisations which ultimately did not act as a cohesive catalyst. One serious weakness of the Congress was that, lacking ideological coherence, it often pandered to the religious sentiments of the minority community. It took up wrong causes, like the Khilafat cause, as the most important cause of the Muslims. There was also a tendency to assume that the Muslims were an exclusive community.

However, there was political consensus for the time being. The adverse effects were seen only in the post-independence era. The secular lead given by Nehru was not followed up and in time, we have accepted caste, linguistic groups and majorities and minorities as exclusive categories. The election process, too, has reinforced twin kind of thinking and there has been an increased communalisation of politics. The minorities, especially the Muslims and the Sikhs, have fallen prey to fundamental reactionary elements. Among the Muslims can be seen greater exclusiveness and a greater confidence, and Dr Hasan wondered whether this could be linked to Arab money or trends in other parts of the Muslim World.

The four speakers gave thought-provoking talks which led to a lively discussion. However, one feels that there was one common lapse. The problem exists and it was analysed: what is important, however, is to provide a viable solution. A few strategies were hinted at but nothing definite was stated. ■

CAREER COUNSELLING

BY G.J. UNNITHAN

Director, Students Advisory Bureau, University of Rajasthan

I wish to appear for the Licentiate Exam of the Federation of Insurance Institutes. What are the eligibility requirements and from where can I get the prospectus and application forms?

Devan, Bombay

Exams for the award of diploma in insurance are conducted by the Federation of Insurance Institutes, Universal Insurance Building, Sir P.M. Road, Bombay-400 001. The exams are conducted for Licentiate, Associateship and Fellowship and are of a very high standard. The Licentiate exam is of a preliminary nature and deals with the basic principles of insurance and its various branches. At the Associateship level candidates are expected to specialise in any one branch, i.e., Life, Fire, Marine, Miscellaneous or General. At the Fellowship level the candidates study Management and are also initiated into the study of Statistics, Marketing, Economics, Accounting and Management Accounting. The exams are conducted at more than 80 centres all over the country, and also at the overseas centres once a year, in October, except for the Licentiate exam which is conducted twice a year, in April and October. The diplomas are recognised by insurers, various state governments and the Indian Government.

The papers for the Licentiate Exam include (a) Life: Principles of Life Assurance; Practice of Life Assurance; Elements of Modern Commerce; (b) Non-Life: Principles of General Insurance; Practice of General Insurance; Elements of Modern Commerce.

I am a Science graduate in Biology with six years teaching experience. I want to do B.Ed. through correspondence. Which universities in north India offer this course?

V. K. Karan, Bihar

Correspondence courses in B.Ed. (for in

service teachers) are conducted by the following universities in north India: Bhopal University, Bhopal-462 006; University of Jammu, Jammu-180 001; University of Kashmir, Srinagar-190 006; University of Rajasthan, Jaipur-302 004; Utkal University, Bhubaneshwar-751 004.

I am interested in Optometrics. What are the basic qualifications needed for pursuing a career in Optometrics and which institutions in India and abroad offer specialisation in this branch?

Retna Thawait, Raipur

Basic qualification for Optometrics is class XII (Science). The All India Institute of Medical Sciences, New Delhi-110 016 conducts a B.Sc. (Hons) course in Ophthalmic Techniques. Diploma courses are offered by Gandhi Eye Hospital, Aligarh; Medical College, Trivandrum; Minto Ophthalmic Hospital, Bangalore; Eye Hospital, Sitapur (UP); Madurai Medical College, Madurai.

What are the addresses of institutes in the US offering Health Management courses for medical graduates?

Sujeet Kumar, Raipur

The number of universities/institutes in the US offering postgraduate courses in the management of Health Services is quite large. Some of the addresses are: Director, Business Graduate Program, School of Business and Administrative Sciences, California State University, Fresno, Cal. 93740; Assistant Dean for Graduate Programs, School of Business Administration, University of Connecticut, Storrs, Conn. 06268; Graduate Counselling Office, College of Business Administration, Georgia State University, Atlanta, Georgia 30303; Boston University School of Management, M.B.A. (Health Care Program), 685 Commonwealth Avenue, Room 133, Boston, Mass 02215; Director of Admissions, University of Chicago, Graduate School of Business, 1101 East 58th Street, Chicago, ILL. 60637.

For a complete list of addresses please contact the USEFI in Bombay ("Sundeeep", 4 New Marine Lines, Bombay-400 020).

Can you provide details regarding admission to B.Sc. (Dairying) in the National Dairy Research Institute, Karnal?

George Mathew Tharakan, Calicut

The minimum qualifications for admission to B.Sc. (Dairying) is 10 + 2 (or its equivalent) with Physics, Chemistry, Mathe-

maths and English with 50% marks in the aggregate and 45% in each of the Science subjects. There is an objective-type entrance test, usually held in June at Karnal, Bangalore, Bombay and Kalyani (West Bengal). Candidates are examined in Physics, Chemistry, Mathematics and General Knowledge. Final selections are based on state-wise representation-cum-merit. The advertisement for admission is published in March.

I am interested in a career in Architecture and would like to know the addresses of the various institutions in India offering the course.

Zeena Niaz, Jaipur

Most courses in Architecture are of four to five years duration, after the XII with Science and Mathematics as subjects. There is an entrance test to these colleges. Some of the institutions offering the course in India are: College of Fine Arts & Architecture, Hyderabad-500 488; M.S. University of Baroda, Baroda-390 001; Centre for Environmental Planning and Technology, University Road, Navrangpura, Ahmedabad-380 009; Visvesvaraya University College of Engineering, Bangalore-560 001; B.M.S. College of Engineering, Bangalore-560 019; H.K.S. Engineering College, Gulbarga-585 102; Mangalore University, Manipal Institute of Technology, Manipal-576 119; College of Engineering, Trivandrum-695 016; Sir J.J. College of Architecture, Bombay-400 001; B.R.P. Sabha's College of Architecture, 2043 Sadashir Peth, Chitranalacharya Purnam Chowk, Tilak Road, Pune-411 030; School of Architecture & Planning, Madras-600 025; University of Roorkee, Roorkee-247 276; Government College of Architecture, Lucknow; University of Calcutta, Bengal Engineering College, Howrah-711 103; Faculty of Engineering & Technology, Calcutta-700 032; Chandigarh College of Architecture, Chandigarh-160 012; School of Planning & Architecture, New Delhi-110 002; College of Engineering, Farmagudi, Goa-403 405; Vishveshvaraya Regional College of Engineering, Nagpur; Regional Engineering College, Tiruchirappalli-620 015; Indian Institute of Technology Kharagpur. Courses in Naval Architecture are conducted at IIT Kharagpur and IIT Madras and at the Department of Ship Technology, Cochin University, Cochin.

Employment prospects are fairly good. Freshly qualified architects generally take up salaried jobs in private firms, in the government or in similar organisations.

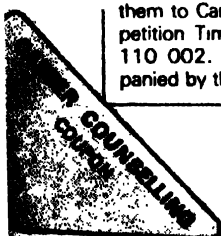
Are there any undergraduate scholarships awarded by the Indian Government for pursuing engineering and technology abroad?

Tarashanker Behera, Sundergarh

There are no such scholarships. ■

NOTE TO READERS

Before rushing in your career problem, check if it can be solved by looking up our sections on **Careers** or **Career Counselling** in the earlier issues. Space is limited; the mail received staggering. Letters chosen are those of general interest or in particular cases where the information is hard to find or has not been published before. Many readers ask for a personal reply. Sorry, this is not possible. So please don't send postage or envelopes. Make your queries specific and brief. Send them to Career Counselling, Career & Competition Times, 10 Daryaganj, New Delhi-110 002. Your letters should be accompanied by the coupon.





Coffee Break

WIZARDS BEHIND THE WIRE

"Hundreds of newspapers, though published in cities scattered from coast to coast, were as alike as so many peas in a pod", remarked Marlen Pew, editor of *Editor And Publisher*, in the 1920s. An exaggeration, perhaps, but true none the less, thanks to news agencies which simultaneously supply news to large numbers of newspapers both in their country as well as worldwide.

Any newspaper has limited resources which makes the job of covering developments all over the world rather difficult. It is here that the news agency, wholesale collector and distributor of news, steps in to render assistance. Ninety sovereign countries have news agencies while 40 have none.

There may be agencies functioning at the regional, national or international level. UNESCO defines a world agency as an agency which maintains a network of correspondents to collect news in a great number of countries and a headquarters staff which edits these news items as well as domestic news and despatches them as quickly as possible to (a) the agency's bureaux abroad for local distribution; (b) to national agencies with which it has an agreement; and (c) directly to subscribing newspapers and broadcasting stations abroad. And for the reception and distribution of these services, extensive telecommunications like telephones, teleprinters and satellites are used.

Perhaps the best overview of a world agency appeared in a *London Sunday Telegraph* editorial. According to this it is "...like the air we breathe. It is nowhere, but it is everywhere. It is shapeless but it shapes men's thoughts. It has no policy but policy cannot be made without it. It is journalism at its most self-effacing, yet at its most essential.

"It has only one product, and that the most perishable of all news..."

At present, there are five major world news agencies: AP, Reuters, AFP, Tass and UPI.

AP or Associated Press is a US-based agency with headquarters in New York. Founded in 1848*, it is the oldest of the world agencies. In praise of AP, Mark Twain, the celebrated American novelist, once said: "There are only two forces that can carry light to all corners of the globe—the sun in the heavens and the Associated Press down here." Ten thousand newspapers, radio and TV stations in over 110 countries utilise the service of this cooperative, non-profit organisation known for its independence and objectivity.

Reuters, the second-oldest news agency, came into existence in 1850 due to the perseverance of Julius Reuter (see box). **AFP** or

Agence France Presse was constituted in 1944 soon after France was liberated from Nazi occupation. It is an autonomous public body. At the moment its services are being used by 1,200 subscribers and for this, it has 92 offices abroad and 1,500 correspondents on its staff.

Tass or Telegrafomicheskoye Aгенство Sovetskoye Soizuzm is the Moscow-based central news agency of the USSR. Its control is vested in the government but it is self-supporting financially and has 10,000 subscribers. **UPI or United Press International**, the second biggest news agency in America, was formed in 1958 following the merger of United Press Association and International News Services. Operating in 114

countries, it has over 6,400 subscribers.

India, too, has efficient news agencies of its own among which are two English news agencies and two Indian language news agencies. The former include PTI and UNI and the latter Hindustan Samachar and Samachar Bharati.

The Press Trust of India (PTI) was set up in 1949. The largest national news agency, PTI is a non-profit venture with a total staff of about 1,300 and over 70 bureaux spread over the country and for world news it has arrangements with foreign news agencies. **The United News of India or UNI** is a substitute of the 25-year-old UPI (United Press of India). Founded in 1961, it has 53 bureaux across the country and a staff

LORD NEWSBREAKER

In today's world, most newspapers would find it nearly impossible to function without news agencies. But it was not always so. In 1850, when Paul Julius Reuter tried to sell his news services to London dailies, they scoffed and clearly told him that they would manage perfectly well themselves. But Reuter did not give up and it is thanks to his efforts that the importance of news agencies was highlighted.

Reuter, born of Jewish parents in Cappel, Germany, in 1816, began his career by working in a bank. After a couple of years, he figured out that he could make more money if he could obtain and sell advance business news. Accordingly, he set up an office at Aul-la-Chapelle (now Aachen) and bought some carrier pigeons. Each day, he would send a couple of pigeons to a friend in the Brussels stock exchange by the mail-coach. His friend would attach the latest stock prices to the birds and set them off. The pigeons arrived three hours before the mail-coach and Reuter supplied this information to businessmen who paid him for this service.

With the commissioning of a telegraph cable from London to Paris, Reuter was shrewd enough to move to the British capital for it was the principal business city, not only of Europe but of the whole world. His business soon built up and with agents in Berlin, Vienna, even India and the Far East, Reuter felt that he could sell general news too, particularly as the popularity of newspapers was growing. But here, he found the going difficult and despite circulating some foreign news freely to the dailies, Reuter was able to lure only a few of them.

The clincher came in the form of Napoleon III's speech in Parliament. This speech was looked forward to by the whole world for it was rumoured that war was going to break out between France and Austria. Reuter obtained a copy of this speech which he promised not to open till Napoleon had started

speaking. (The first known attempt of self-embargo.) Reuter also hired the London-Paris cable for the time when the speech was to be made. When Napoleon rose in the French Parliament, Reuter opened the speech package and began telegraphing it to his subscribers even while the speech was being delivered. Non-subscribers, not wishing to let such 'scoops' go by in future, hastily joined the bandwagon.

Reuter strived hard to provide comprehensive coverage of news and outdo his competitors. When the Franco-Austrian war broke out, his correspondents fanned out into the French, Sardinian and Austrian camps. As a result, he was able to give three different coverages of the same battle. With the breaking out of the American Civil War in 1861, Reuter instructed his New York agent to collect and despatch the latest news on board the weekly steamer for Europe. (There was no Atlantic cable those days.) Once the ship neared Ireland, the messages were thrown overboard where they were picked up by a motor boat, taken ashore and telegraphed by a special line to Cork laid by Reuter for the very purpose. This news was later wired to London. When President Abraham Lincoln was assassinated, Reuter's agent chartered a fast steamer, overtook the mail boat and flung the message on board. It reached London a full week before other reports came in.

Reuter's efforts were lauded and he was given the title of Baron in 1871. He retired as the head of his news agency in 1878.

Today, Reuter's is a public non-profit organisation that sells its services in over 110 nations. It has 600 full-time and 1,200 part-time correspondents spread over 183 countries. Besides, it has over 3,000 people on its staff. Reuters does not do any domestic coverage in Britain for which it depends on Press Association, a local agency. It has 11 regional bureaux all over the world.

V. Niranjan, New Delhi

*It was first named Harbour News Association and reorganised as AP in 1892.

multilingual agency and started functioning in 1948. *Semacher Bharati* commenced its operations in 1967 and, like *Hindustan Semacher*, caters mainly to the needs of small and medium language newspapers.

News agencies provide newspapers with well-balanced, comprehensive news coverage and work in accordance with deadlines every minute. The job of the agency man has been aptly summarised by the *London Sunday Telegraph*: "The agency man is a special kind of journalist. He must recognise news the moment it happens—then look at once for its sequel.... His task is the thankless one of seizing on news at all times of the day or night, and circulating it immediately to thousands of newspapers and radio stations around the world. He may feel sometimes that he is filling a bottomless pit, but he is the vanguard of the war against ignorance."

Despite their rather thankless job, news agencies do manage to win applause for outstanding contributions in the journalistic world too.

K. Singh, Chandigarh

Assignment—War

Vietnam. The war that unmade President Johnson... and made some outstanding journalists. One of them, Peter Arnett, won the 1966 Pulitzer Prize and made his way into John Hohenberg's collection. The Pulitzer Prize Story II. Excerpts:

War is as much a battle between man and man as it is between truth and falsehood. Nowhere else was lies purveyed as facts than by the American Government in its conduct of the Vietnam War. The oldest news agency in the world, the Associated Press, did some spectacular, honest coverage of the Vietnam War in all its ramifications. Exposed to threats, innuendos and insults, it yet carried out its "thankless job" regardless. None better can expound on its saga than Peter Arnett.

Arnett, a doughty little New Zealander with the face of a cherub and the heart of a lion, covered the Vietnam War for AP for eight-and-a-half years. More often than not, he risked his life under fire to get the news.

The pitiless accuracy of his stories about American defeats, when Washington was claiming glorious victories, earned him the enmity of the American establishment in Saigon. He was spied upon, attacked in the most scurrilous terms by the embassy's men and treated as if he had been an enemy agent. But he emerged from the cauldron of the war unchanged either by the vicious criticism he had undergone or the many honours that had been heaped upon him.

He won the Pulitzer Prize for International Correspondence for his Vietnam War reporting in 1966, the 50-year anniversary of the awards.

One of his best stories was one in which he landed by accident in the midst of a firefight between a Marine supply column and Soviet-and-Chinese-supported Viet Cong in the Ia Drang Valley. Here it is, as he wrote it that hot summer afternoon with the smoke of battle still lingering about him.

THE AGONY AND DEATH OF SUPPLY COLUMN 21

By Peter Arnett

From the Associated Press in the *Louisville Times*,
August 19, 1965

VAN TUONG, Vietnam (AP)—The mission of US Marine Supply Column 21 yesterday was simple:



Get to the beachhead, resupply a line company and return to the 7th fleet mother ship anchored a mile out in the bay.

It never found the line company. And it never returned.

Supply Column 21 was a formidable force made up of five steel-shod amtraks—35-ton amphibious vehicles—to carry food and ammunition—and two M 48 tanks to escort them once ashore.

The column packed a total of 287 tons of steel. It was made up of 30 men.

The paths that led to its destruction were paved with confusion.

Failing to locate the designated line company immediately, Column 21 set out to look for it.

But the huge amtraks, once out of the water, were unwieldy. They flopped from one rice paddy to another, with their crews calling at one battalion and then the next. No one seemed to pay much attention.

At 11 a.m., Supply Column 21 was about 400 yards ahead of the nearest Marine riflemen. The vehicles were deep in Viet Cong territory and, suddenly, were deep in trouble.

Survivors said the Viet Cong rose out of hedge rows and swamps.

Lance Corporal Richard Pass of Homewood, Illinois, said his amtrak veered aside as explosions erupted around them. The leading tank was hit with an armour-piercing shell. Two men inside were wounded.

The terraced paddies made manoeuvring difficult and the supply men were not trained for it. Attempting to get into good firing positions, three of the five amtraks backed into a deep paddy and bogged down.

The other two edged towards the tanks for shelter. One didn't make it. A Viet Cong knocked it out by dropping a grenade down its hatch, killing two Americans inside and wounding others.

Mortar fire bounced off the vehicles and cannon put three holes in one tank. The wounded driver squeezed himself through the 18-inch wide escape hatch under his vehicle only to be riddled by bullets.

Corporal Pass saw Viet Cong with ammunition bandoliers, black pajama uniforms, and camouflaged steel helmets move right up to an amtrak 30 yards to his left.

He said the doors of the vehicle clanged open as the two drivers tried to make a break to Pass's

The agency at work: UPI snaps a displaced South Vietnamese family during Operation Nathan Hale against Viet Cong.

vehicle. One of the Americans was killed as he leaped out.

The other was plunging through the paddyfield swinging his Marine knife when he went down. When pulled out dead today, he still had the knife clutched in his hand.

Soon after noon, as the hot sun beat down on the scurrying figures and the steel vehicles, the Viet Cong knocked out a third amtrak. Survivors massed in the other two.

Corporal Frank Guilford of Philadelphia said machine guns sliced into the guerillas, but they kept coming.

The men took turns as sharpshooters at peepholes on top of the vehicles. All were wounded in some degree.

"I couldn't manoeuvre up there," said Pfc. James Reeff of Seattle, who escaped with a slight injury.

A young corporal shouted, "Okay, men, we're marines. Let's do the job."

He started to climb out of the vehicle but never got his rifle to his shoulder. A bullet hit him between the eyes.

Among those sweltering in the other amtrak was Staff Sgt. Jack Merino of Limita, California. He said he almost passed out from heat exhaustion. The men took turns splashing water over each other from resupply cans within the vehicle.

Merino said that in midafternoon he heard a man outside whispering, "Amtrak, amtrak." He proved to be a wounded tank crewman. Merino and others pulled him inside.

"It was a hair-raising moment but we managed it", Merino said.

The Marines continued with the nerve-racking task of keeping off the attackers. The enemy bodies began piling up.

In late afternoon, air strikes eased the pressure.

By this time, a lieutenant had been killed and another wounded.

Another tank joined the beleaguered group.

At daybreak, a solitary helicopter landed at the scene. It had mistaken the landing zone.

At the drone of the helicopter, the Americans surged from their amtraks like moths to a flame.

Crouched, and with weapons at the ready,

own and the enemy. They carried the wounded to the helicopter and left the dead.

The helicopter came back once for more wounded.

Ground forces arrived to relieve the others. In the interval they had scoured the nearby paddyfields and brush for Viet Cong bodies. They found 18.

Corporal Earle Eberly of Sycamore, Illinois, said:

"We don't like being here and killing people and being killed. But this is a job we've been told to do, we have to do it, and we're going to do it."

The fate of Supply Column 21 was sealed at noon.

The men thought the disabled vehicles might be carted off and repaired. But an officer of the relief force told them:

"Take your personal belongings out of the vehicles. We're going to blow them up."

The remains of the amtraks at Van Tuong will be a reminder of Supply Column 21.

Arnett rode to battle in the supply helicopter that landed by mistake in the midst of the dying

the Viet Cong.

He had managed to talk his way on the helicopter at Da Nang at 5 a.m. after having landed from Saigon in an emergency flight with only two hours' sleep. He was the only reporter to see action that bloody day.

When he was plumped into the thick of the fighting, he found a US tank and three amtraks had been destroyed, seven Americans dead, 28 others wounded, and many survivors in shock from the intensity of the ferocious Viet Cong attack.

Arnett remained on the job with Supply Column 21, sharing the Marines' agony and their danger, until the relief column arrived six hours later. And when he emerged, dirty and tired but intact, he found outraged American information officers loudly denying that the enemy had knocked out any US armour.

But Arnett had pictures to prove his story and, once again, the lying was demonstrated to be a sorry part of the American military command character in Vietnam. There was never any doubt in his war reporting, during the eight-and-a-half years he spent in Vietnam, about who was telling the truth.



Do you love a good story? Nothing can be better than the Arabian Nights. An illustration from the tale of the Fisherman and the Genie.

Booktalk

THE MASTERS IN PIECES

They are all there, from Homer's *Iliad* and *The Bhagvadgita* through Dicken's *David Copperfield* and Melville's *Moby Dick* to Pasternak's *Doctor Zhivago* and Graham Greene's *Brighton Rock*. But...

Lawrence Durrell writes in his introduction to *100 Great Books: Masterpieces Of All Time** that it is "the plain man's vademecum to culture", and adds, perhaps a little sceptically, that "it should whet the curiosity of the young reader today". And never were words so truly written.

The book leaves much to be desired. It would, perhaps, have been better had the publishers just compiled the titles of what they consider to be 100 great books (it is fortunate that they did not call it "100 Greatest Books", because what is one man's meat may be another man's poison) and added a short summary of each book. This would have whetted the curiosity of "young readers" because one feels that this book has had just the opposite effect. A large number of reviewers have attempted to give their analysis of the books included in this work and some of them have even given short biographies of the authors and written a few words about their own works. The analysis, however, are amateurish and the beauty of the masterpieces does not come through at all. Take, for instance, the review of Milton's *Paradise Lost*. The reviewer first cites the exquisite lines of Milton depicting Satan's first sight of Adam and Eve in the Garden of Eden:

"Two of far nobler shape, erect and tall,
Godlike, with native honour clad,
In naked majesty seem'd lords of all...
So hand in hand they passed, the loveliest pair."

Then, the reviewer goes on to add his own.

*100 GREAT BOOKS: MASTERPIECES OF ALL TIME, edited by John Canning; published by Rupa & Co., New Delhi, by arrangement with Souvenir Press Ltd., London; pages: 640; price: Rs 50.

positively absurd, comments: "In this ecstatic description of the first human lovers in their heavenly bower, was Milton thinking of his own wedding night in the bedroom on Aldersgate Street? Eve was very unlike the first Mrs Milton, who was far from submissive..."

To take another instance: Henry Fielding's *Tom Jones*. One of the world's greatest picaresque novels has been made to sound like the adventures of a lecherous young man in this review and one fears that the wrong kind of interest may be aroused in the young reader.

The reviews are not all bad, however. It is evident that when the reviewers deal with non-fiction, the effect is more interesting. Rousseau's *Social Contract*, Kant's *The Critique Of Pure Reason* and *The Koran* have been dealt with rather well and give a factual account of what the books actually contain without trying to analyse them critically. There are a number of illustrations, as well, some of which are quite rare. Further, as Durrell writes, it provides the beginner with a list of books which are certainly all-time greats. Anybody who wishes to improve his knowledge of literature has a ready guide to go by in this edition of the *100 Great Books: Masterpieces Of All Time*.

S.B., New Delhi

Extracts from the book:

DOCTOR ZHIVAGO

By Boris Pasternak

Boris Pasternak was born in Moscow in 1890, the son of cultured parents. After graduating in Law from Moscow University, he realised that poetry was his vocation and devoted almost his whole life to writing. Always an inner emigre and an opponent of the Soviet regime, he showed courage on several occasions by dissociating himself from its actions; for a period after 1945 his work was banned. At this time he began writing *Doctor Zhivago*; it first appeared in 1957 in Italian and in English the next year. The same year he was awarded the Nobel Prize for Literature. This released a storm of condemnation by the Soviet authorities and he was obliged to renounce the prize for the sake of stay-

ing in his homeland. He died in 1960.

The novel presents a graphic panorama of life in Russia during the Revolution, the Provisional Government and the Civil War, with many characters from all sections of the population caught in the turmoil and struggling to survive.

Life breaks in with elemental force in the public aspect of the novel, but also in the private world of two characters, Yuri Zhivago and Larissa ("Lara") Guishar, and it is their story, running parallel to and influenced by political events, which provides the main thread. Just as Russia is fated for revolution, so are they predestined for each other.

We first meet Yuri in 1901 as a child weeping at his mother's funeral outside Moscow. His father, once a millionaire, has long since abandoned his family for a life of dissipation and has been impelled to suicide by an unscrupulous lawyer named Komarovsky who has battered on him. The orphaned Yuri goes to live in Moscow with the Gromekos, a cultured family of intellectuals who have a daughter Tonya.

These are wealthy people, but in a poor part of the city another much impoverished family has come to live—Amalia Guishar, widow of a Belgian engineer, and her young daughter Lara. Komarovsky, who was a close friend of her husband, becomes Amalia's lover, but his eyes are already on the beautiful Lara.

Meanwhile, railway workers are organising a lightning strike, among them Antipov, a track overseer, who is later given a long prison sentence for his involvement. His son Pasha, an intelligent, obsessively tidy boy, then goes to live with another working class family and soon, amidst rioting all over Moscow, is lucky to escape with his life when caught in a mob being dispersed by Cossacks.

But now something terrible happens. We gather that by a mixture of skilful flattery and self-abasement Komarovsky has succeeded in seducing Lara. The scene is not described, only its effects: Lara's conscience-stricken regret and her sense of a stain that can never be expunged.

Three years pass during which, to escape Komarovsky, Lara works as governess to a wealthy family. She now leaves, intending to set

and ask Komarovskiy for the necessary money which she feels he ought in partial reparation to give her. If he refuses or tries to humiliate her, she resolves to kill him. It is Christmas, 1911, and knowing that Komarovskiy can be found at a party given by some friends of the Gromekos she sets out through the snowbound city with a pistol hidden in her muff. On the way she calls on Pasha Antipov, with whom she has been friendly since childhood. Pasha, now grown into a politically idealistic student, adores her. She finds him dressing for the party and on impulse asks him to switch off the electricity and light a candle. "The flame spluttered.... then sharpened to an arrow and steadied.... On the window pane, at the level of the flame, the ice melted, leaving a black chink like a peep-hole." She tells him she is in serious trouble and asks him to marry her as soon as possible, to which he joyfully agrees.

Meanwhile, in the intervening years Yuri Zhivago has qualified as a medical practitioner and developed a strong poetic imagination. Having grown up together, he and Tonya have become engaged. Now, muffled in furs, they are being driven to the same party, past the very house where Lara and Pasha are talking. Yuri looks up and notices the candle-flame shining through the window. It seems to be waiting for someone. "A candle burned on the table, a candle burned," he whispered to himself—the confused, formless beginning of a poem; he hoped that it would take shape of itself, but nothing more came to him."

At the party Lara does not speak to Komarovskiy, but fires a shot at him which misses, and she is arrested. Fearing a scandal, he uses his influence to settle the matter out of court and Lara then marries Pasha, leaving with him for the Urals where they mean to take up teaching. Tonya meanwhile bears Yuri a son and he continues working at a Moscow hospital until, a year after the outbreak of world war, he is drafted to the Galician front as a doctor. By now Lara, too, has had a child, a girl, but there are domestic difficulties and Pasha joins the army while, leaving the baby Katya in the care of friends, Lara volunteers for nursing at the front. Eventually she arrives at the hospital where Yuri is working and he recognises her at once.

With subtlety Pasternak describes how the first threads between Yuri and Lara are spun. They both sense that something lies in wait for them and are reluctant to accept it. After all, both are married and have children. But, talking enthusiastically of the Russian Revolution now beginning, Yuri then turns to "private, individual revolutions" and suddenly something in his voice betrays him. "That is what I've been afraid of," says Lara softly, as if to herself, and pleads with him to "be as I've known you till now and as I want you to be".

A week later Lara goes back to the Urals to teach at the town of Yuryatin and soon Yuri returns to his family in Moscow. It is the time of the Provisional Government under Kerensky and there is fighting in the streets. Food and fuel are hard to come by and through a harsh winter the Zhivago family, including Tonya's father, only just manage to survive. In the spring they decide to migrate to the Varykino estate outside Yuryatin, once owned by Tonya's grandfather, where they can hope to be self-supporting. After a nightmare journey in freight trucks across the war-torn countryside, they settle in a part of the abandoned house. Yuri becomes unofficial doctor to the

keep alive. But Yuri has long since realised that people of his class are destined for destruction and their days are numbered. Once he wrote poetry, but nothing comes to him now: the spirit of the age is against him and the revolution is going sour.

One day he rides into Yuryatin to visit the town library and sees Lara there. He does not speak to her at once, but then calls on her at her flat and when they meet, sensing the future and now accepting it, feeling sure of one another, they talk in plain, unextravagant language and when Lara shows him where she hides the key to the flat she says merely: "You might come one day when I'm out—you can open the door and make yourself at home till I come back."

After many trips to see Lara in the following weeks, always returning to Varykino in the afternoon, there comes a time when Tonya does not see him till the following morning, to be told he has been detained on business. Yuri is acutely conscious of his offence against Tonya, but is powerless in the grip of his love for Lara until one day, returning from Yuryatin, he resolves to break with her and make a full confession to his wife. But at that moment, he is taken prisoner to serve as doctor to a group of Red partisans.

For two years Yuri perforce shares in the desperate misery of warfare against the Whites in the Siberian forest and Pasternak scathingly contrasts the bombast of political catchwords with the realities of starvation, treachery and slaughter. Yuri thinks of Lara and of Tonya: "Tonya, you are my everlasting reproach." Then one day he manages to escape.

After a terrible journey on foot across Siberia, he eventually staggers, half-starved, into Yuryatin and learns that, fearing attack by bandits, the people up at Varykino—his family—left some weeks ago for Moscow. Greatly depressed he manages to reach Lara's flat, finds her out and falls into a sleep of exhaustion, dreaming pathetically of his son. He wakes to find her bending over him and nearly faints with joy. He soon recovers and Pasternak tells us: "They loved one another greatly.... To them—and this made them unusual—the moments when passion visited their doomed human existence like a breath of timelessness were moments of revelation, of ever greater understanding of life and of themselves."

Lara tells him of the blight cast on her life by Komarovskiy and also speaks of a certain Strelnikov, a ruthless ally of the Bolsheviks whom Yuri once met in awkward circumstances on the train journey to Varykino. Strelnikov, who slaughters by the book to achieve his ideals, is none other than her husband, Pasha Antipov, who returned from a German prison camp after the war and made himself useful to the Reds. She senses that he lives only on sufferance and his days, too, are numbered.

Yuri's early enthusiasm for the revolution has evaporated, not for personal reasons but through bitter contempt for the men of blood and doctrine, hostile to life, who have climbed to power. Their idealism has given way to witch-hunting and he and Lara are now in danger, particularly in Yuryatin where there is a revolutionary tribunal, so they decide to go back to Varykino. But before they can leave, out of the blue Komarovskiy appears and urges them to go with him to the eastern maritime provinces where an independent government is to be set up. They both refuse.

the full rigour of the revolution which they lay themselves in the house till an illusion of ordered domesticity is created and they enjoy a brief taste of life as it might have been. Yuri feels an urge to write and at night, while Lara and her daughter are sleeping, composes poetry. In particular, those lines that came to him long ago complete themselves: "A candle burned on the table, a candle burned....", and he knows now that it burned for him and symbolised the love awaiting them.

But within a fortnight Komarovskiy seeks them out again and this time there is not a moment to lose. A train for the Far East is under steam at Yuryatin station, and if they do not catch it the chance may never recur. Lara, for the sake of the child, agrees to go with Komarovskiy, but not without Yuri; so Yuri, determined in fact to go to Moscow to find his family, invents a pretext to follow their sledge in a few minutes on another horse. Thus there is no farewell to Lara, only a wave of the hand, and he waits with death in his heart to catch a last glimpse of her as the sledge climbs a distant hill.

The last eight years of Yuri's life are told in a single chapter. He goes to Moscow, again on foot, finds that his family has been expelled from Russia and gone to Paris. He tries and fails to obtain a visa to join them, and then marries the daughter of the former steward at the Gromeko home. All the time his grip on life and himself is disintegrating till finally he can neither write nor work as a doctor. One day, in a crowded tram, he has a heart attack, struggles out into the fresh air, collapses in the street and dies.

But by coincidence Lara is in Moscow and visits the house where Yuri is laid for friends to take their last farewell. In simple, familiar words she takes her leave, talking as she has always talked to him: "... your going, that's the end of me... the riddle of life, the riddle of death, the beauty of loving—yes, that we understood... as for such trifles as re-shaping the world—no, thank you, these things are not for us... Good-bye my dear one, my own, my pride. Good-bye my swift deep river..."

In a single short paragraph we are now told that soon after this Lara is arrested in the street, as so often happened in those days, and vanishes into a concentration camp, or dies somewhere, "forgotten as a nameless number on a list which was afterwards mislaid". But his poems have survived and, as we now learn, their child survives. There is an epilogue, the scene being the Russian front during the Second World War. Tanya, a laundry girl working with the troops, meets a major General Zhivago and tells him the story of her hard life as an orphan and, guessing who she is, he promises to send her to college and look after her. He is, in fact, Yuri's half-brother on his father's side, illegitimate son of a Kirghiz princess and, though appearing only occasionally in the narrative, always to help Yuri over some difficulty, a character of mystical importance, real yet symbolic. He it is who is both the spirit of Yuri's death and his guardian angel and, recognising this, Yuri is for a long time puzzled about his role. How can death be a help to life? But finally, as we hear from the mouth of Lara, they both understand the riddle, for they have lived it: they have lost parents, home, family, career, comfort, possessions, security, have become penniless waifs, yet in dying to all this have for that very reason, being stripped of everything but themselves, found deep and enduring love. ■

Sports Quiz-39

BY NAROTTAM PURI

WIN RS 100 IN BOOKS

1. From which year were six runs awarded for a hit over the boundary?
2. What is the Sir Robert Menzies Cup?
3. When and in whose name was the Subroto Cup started?
4. Where was the Asian Cup football final played?
5. What is the ball used in ice hockey called?
6. In which sport is the racquet called crosse?
7. Who is the only bowler to have taken two hat-tricks in a Test?

PRIZES

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HOW TO ENTER

- Print the answers neatly in capital letters alongwith your name, age and address. Each crossword must be pasted/clipped to a larger piece of paper.

- You may send in any number of entries, but each must be numbered accordingly and accompanied with its respective COUPON.

- Though all your entries will be included in the draw of lots, you will be entitled to only one prize—the highest in case you're getting more than one.

Closing date for the two contests: February 25.

Address your entries to: The Editor, Career & Competition Times, 10 Daryaganj, New Delhi-110 002.

Solutions to this issue's contests will be published in April '85.

**SPORTS QUIZ
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**KENWORDS
COUPON**

Kenwords-39

BY RANI P. SOMAN

WIN RUPA PAPERBACKS

ACROSS

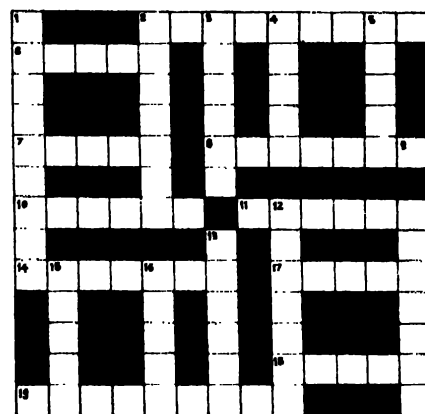
2. A batsman dismissed for zero, off the very first ball he receives, in both innings, gets this (5, 4).
6. A genus of succulent flowering plants, native to warmer parts of America, from which the Mexican drink pulque is made (5).
7. Indian pueblo in New Mexico, also known as the sky city, famous for the feast of its patron St Stephen (5).
8. French naturalist whose theory of evolution of life-forms was superseded by Darwin (7).
10. The Opposition candidate defeated by R. Venkataraman in the vice-presidential elections (6).
11. He was the supreme God of the underworld and judge of the dead in Egyptian mythology (6).
14. Curve in the course of a river, especially on a flat terrain (7).
17. Productions of art, especially of a curious or antique nature (5).
18. The northern most part of the habitable ancient world (5).
19. Venue of the 1986 Commonwealth Games (9).

DOWN

1. First indigenously designed nuclear power plant of India is situated here (9).
2. This US biochemist shared the Nobel Prize

in 1960 for studies in Medicine and Physiology (7).

3. Black metallic composition used for filling in an incised design on metal (6).
4. Sustained contraction of a muscle—both smooth and voluntary (5).
5. One of the three orders of architecture, developed by the 6th century B.C. and used in the Erechtheum (5).
9. Carried on the Brahmo Samaj after 1816 with its revival by Tatvabodhini Sabha (6, 3).
12. —day Adventists—a Christian sect in the US (7).
13. Real or legendary King of the Britons who died in a battle against the usurper Modred (6).
15. Either of the two large African antelopes, found in most of Africa, south of the Sahara (5).
16. Portuguese navigator who discovered the Cape of Good Hope (4, 1).



SOLUTIONS... SOLUTIONS... SOLUTION

SPORTS QUIZ-37

1. Charanjit Kumar
2. J.M. Gregory (Australia) in 70 minutes
3. Roy Fredricks (West Indies) off 71 balls
4. Waterpolo: Yugoslavia
5. He was a cancer patient
6. 4 X 100 m relay (men): USA

Winners

First Prize (all-correct): 1. Manish S. Ladha, Thane. 2. Pravin Gupta, Raipur.

Consolation Prize (all-correct): 1. Vikram Sodhi, Bombay. 2. Sunny Pandita, Srinagar. 3. Anil Kumar, Delhi. 4. Devendra Kumar, Dehra Dun. 5. Savit Khanna, Pune.

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KENWORDS-37

Across: 6. Chrysanthemum 7. Rand 8. Otis 9. Oasis 11. Mozart 12. Camera 14. Shale 15. Lane 17. Beet 18. Sebastian Bach

Down: 1. Metallography (reverse) 2. Byrd 3. Gneiss 4. Peso 5. Jurisprudence 9. Orris 10. Slate 13. Darwin 16. Eras 17. Bubo

Winners

First Prize (all-correct): 1. Vijaykumar G. Kulkarni, Bombay. 2. Pankaj, New Delhi.

Consolation Prize (all-correct): 1. Vipul Parekh, Jabalpur. 2. K. Shankar, New Delhi. 3. Sandeep Kumar, Jhansi. 4. Neeraj Kumar, Lucknow. 5. Satya Jeet Chakravarty, Shillong.

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Club Desk

Let's start the New Year on an enthusiastic, energetic note. Perk up your clubs' activities—remember the most active, innovative club will be awarded the 'Club of the Month' title. There's so much to do these days. The Bhopal tragedy has inflicted agony and misery on thousands—how about joining hands to organise relief funds for them? The results of the Lok Sabha elections can give rise to numerous topics of discussion and debate. For starters, 'New trends behind the poll', 'Role of Opposition in a democracy', '1977 reversed', 'United we stand, divided we fall', 'The Indian voter comes of age'.... Set your brains a-ticking and you'll find many more topics too.

Meanwhile, for your convenience, we are continuing with our alphabetical list of CCTimes Clubs all over the country. If you aren't a member of a CCTimes Club, become one and if you already are then pull your socks up and move. And inform us of your movements at: The CCTimes Club Desk, C/o Career and Competition Times, 10 Daryaganj, New Delhi-110 002.

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THE LETTER 'C'

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M. No. C-8

THE LETTER 'D'

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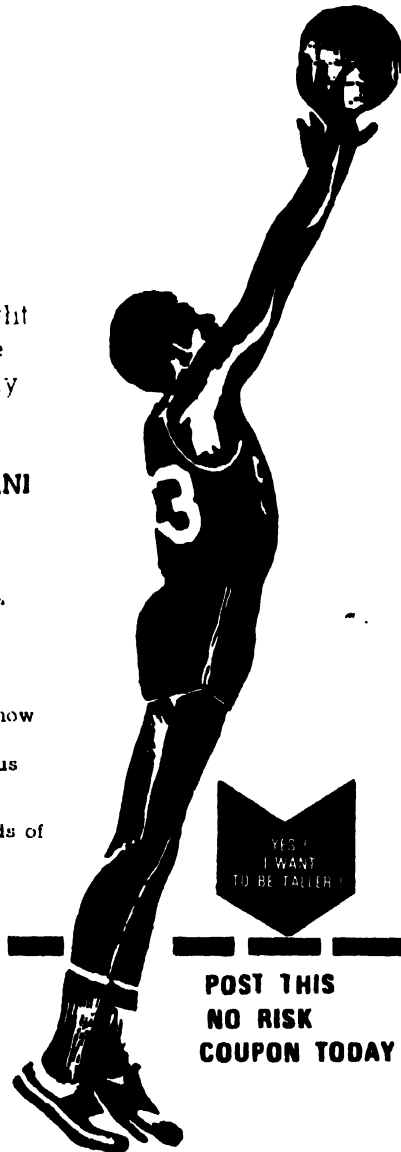
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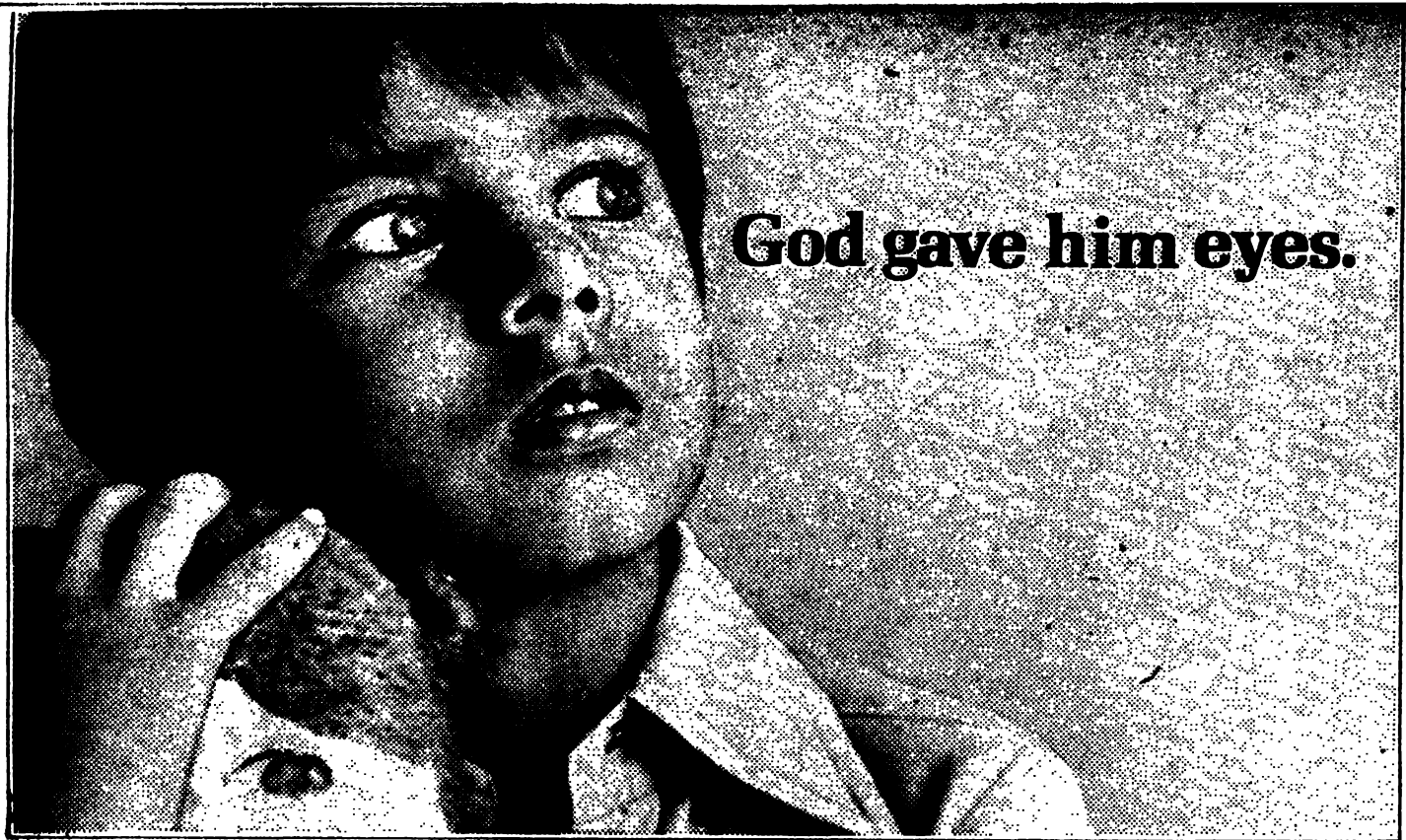
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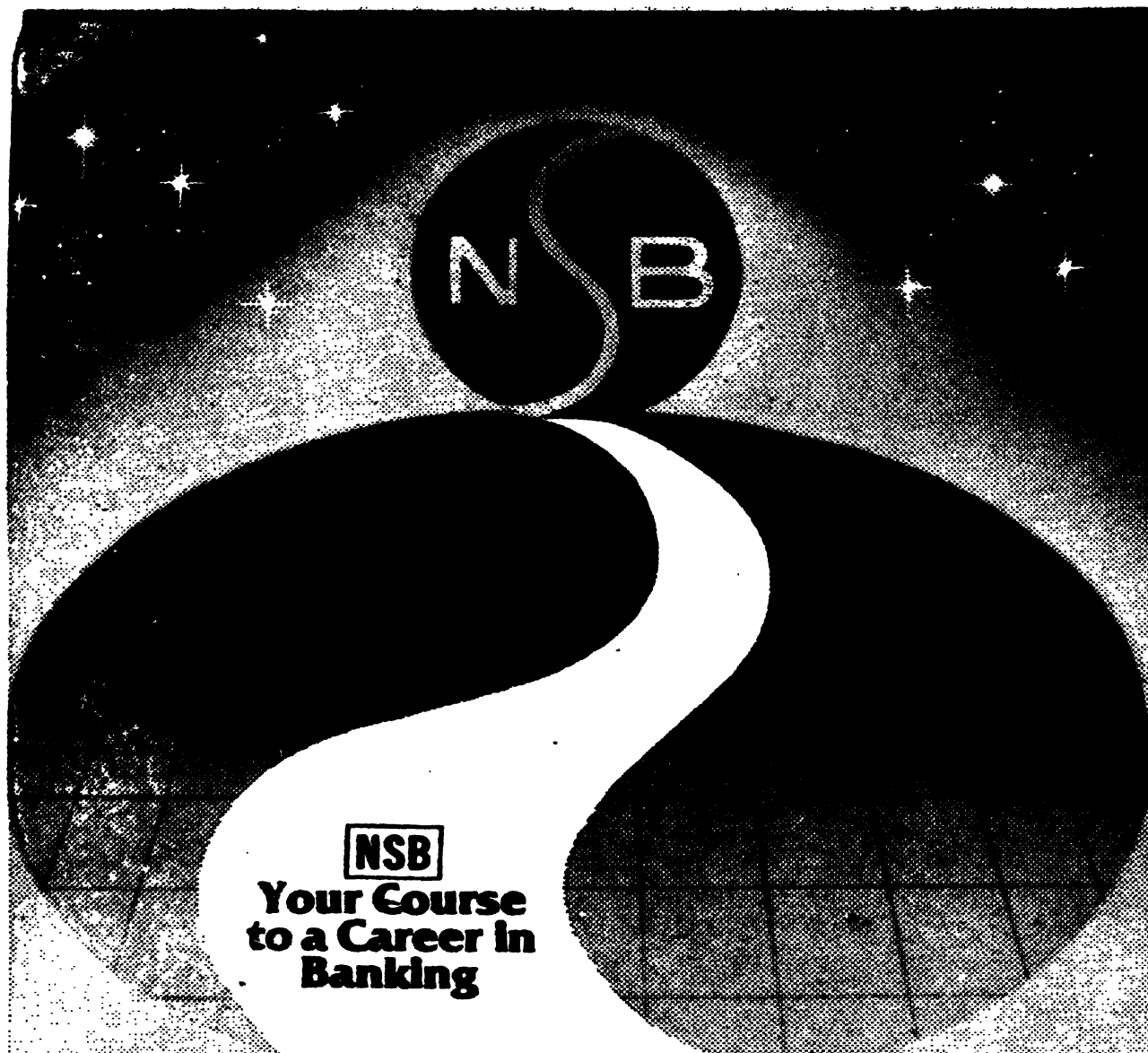
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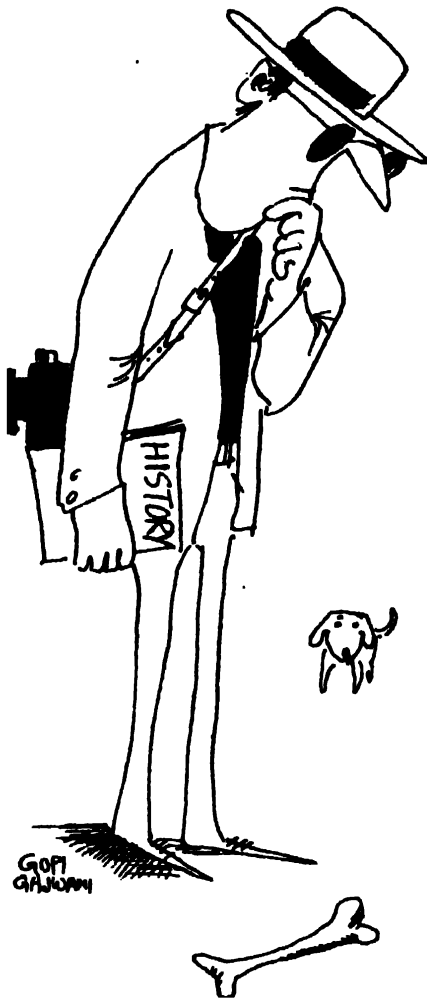
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MARCH 1985 VOLUME 5 NO. 3



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LETTERS

End Of A Winner

To win is not the end but the end is to win till the end. The real challenge for winners is to maintain victory effectively and forever.

S.K. Chatterjee, Satna

Best Letter: Rs 40

Novel Pests

We, in India, suffer from many problems like flood, drought, poverty, communal riots, etc. But, today, most problems are caused by *khaki* and *khadi*.

Neeraj Verma, Patna

Prize-winning Letter: Rs 25

Nice Homework

Hats off to the retired Brigadier for his superb *Geography Homework* (Jan'85).

Suhas Rao, Bhopal

The special feature was an enjoyable brain teaser on global knowledge.

C.M. Srikanth, Dist. Gulbarga

Geography Homework is an excellent feature in that it is definitely a boon to jobseekers and especially to Civil Services aspirants.

G. Sudarshan, Hyderabad

The special feature was very informative and specially helpful for competitive exams.

Girish Parvatikar, Hyderabad

Geography Homework made excellent reading. Can I hope for a similar issue on Geology as it is also a leading Science today?

Ratan

THEY SAY IT

There has been a variable response to Mukesh Kumar Sri's opinion (*You Said It! Letters*, Dec'84) that Arts and Commerce graduates be given more weightage than Science graduates in banks and insurance companies. Some opinions

Commerce students have been taught the method of maintaining bank accounts, insurance companies' accounts and balance sheets. Now, what is the benefit of having a Commerce degree, if we are treated at par with the novice Science graduate in bank jobs?

R.K. Agrawal, Hojai (Assam)

By competing for banking and insurance jobs and other similar jobs Science graduates are only wasting their vital talents to the detriment of national interest. Science graduates should be debarred even from jobs where their talents are not utilised properly and beneficially.

V. Radhakrishnan, Bombay

Many commissions invite applications from Arts, Commerce and Science graduates simultaneously for administrative and other

Youth Rule

The year 1985 has been declared as the International Year of the Youth. It is a matter of coincidence that India is now in the hands of young rulers.

P.K. Praveen, Bhopal

The stunning mandate received by the Congress(I) proves that the electorate could not be bothered any more by the antics of defectors. The torch has gone to a new generation of youth, with new ideas and new horizons.

Shanmugam Mudaliar, Pune

A young man of 40 can be the prime minister of India. Then why can't a man of 40 be eligible to join a government service?

A.K. Mukul, Patna

Politics is the last refuge of a fading film star.

Shiv Pratap Singh Tomar, Mathura

The unity and integrity of this vast country cannot be disturbed for long either by foreign hands or by internal strife because the massive mandate proves that nationalism is in the Indian blood.

Dinesh Ranjan, Birpur (Bihar)

The Gracious Psephologist

My psephologist maid, a 40-year-old woman, had predicted long before the election results that the young and suave Rajiv Gandhi will be the dynamic successor to Mrs Gandhi.

Saraswathy S. Mudaliar, Pune

Insured Opposition

Sweden is said to have an insurance against 'bad luck'. India could take the cue from them, and introduce such an insurance scheme so that opposi-

subordinate services. Hence, it is obvious that competition demands competence and hard work irrespective of the field of specialisation.

Shamim M. Khan, Seyala (Rajasthan)

Preferential treatment to Arts and Commerce graduates can only be justified if it is found that they are more suited for jobs in banks and insurance companies in comparison to Science graduates. Otherwise there is no harm in considering any capable graduate

Humayun Jamil Khan, Patna

It is necessary to give weightage to Arts and Commerce graduates in banks and insurance companies. At the same time it is necessary to increase the standard and efficiency of Arts and Commerce students and prepare them for stiff competition.

D.P. Malliya, Bombay

The need of the hour is the realisation of the fact that success is not something one can beg for; it is something one will have to struggle for. Hence Arts students should reorganise and reorient their efforts. Mere requests to provide concessions will prove worthless.

Satvir Dehiya, Rohtak

scheme for the contingents created by teams, ends every five years.

V. Radhakrishnan, Bombay

A threat to democracy becomes a reality when the Opposition is weak. The only major opposition party in the Parliament is Telugu Desam. It is for the Opposition to prevent the ruling party from becoming

D.W. Mudthakar, New Delhi

The Opposition in Parliament is an endangered species. As responsible citizens we should be vigilant enough to point out the errors in the policies of the Rajiv Government.

Prashant K. Thakur, Delhi

Corruption Nationalised

In the recent Lok Sabha elections, there was much extravagance by a particular party in our town. "So, corruption has been nationalised in this country!" a friend remarked.

Samarandranath Mohapatra, Vani Vihar

Arms And The Man

Reflecting on the recent purchase of Harpoon missiles and other sophisticated weaponry by a neighbouring country, one has this to say:

Home he brought the Harpoons for raid.

He'll sooner or later pry.

All the watching countries said,

The debt of Harpoons will make him cry.

R.N. Mitra, Jaipur

Unsporting Sports

Dropping Kapil is only an attempt by Gavaskar to get even with the former Indian skipper who had dropped him during the two World Cup matches. By indulging in such politics, Gavaskar is not only spoiling the career of the cricketer concerned but is harming the future of Indian cricket as well.

R. Padmavati, Bhilai

Why do we have only one P.T. Usha to boast of? Is it because ten others have been discouraged right from the start, their interests curbed?

Suman Bose, Nagpur

Achievement Pleased

It's high time the Planning Commission is renamed Achievement Commission. Or even after years of independence we might still keep planning without having any major achievements to display.

S.Arune Chari, Baroda

Educational TV

As far as the educational telecast is concerned, most of the indigenously prepared programmes are uneducative and uninteresting. On the contrary, the series on Optics obtained from the British Council is engrossing.

Amik Paul, Lucknow

The Baby Bomb

Bombs are less dangerous than the baby boom. If long term self-sufficiency in food is not achieved, then India will soon become another Ethiopia.

N. Mahendran, Coimbatore

WFT

The correct address of the Indian Institute of Foreign Trade is Ashok Bhawan, 93, Nehru Place, New Delhi 110019 (*Career Counselling*, Jan'85).

Sahaj Ram, New Delhi

Hello folks...



Come summer, and begins job hunting. The "lucky guys" graduate in Engineering, Computer Science, Management or in a discipline highly sought after by employers. They, in fact, can afford to select employers for they often get more than one job offer. However, the number of such "lucky guys" is limited.

The majority graduate in areas where the number of pass-outs far exceeds the jobs. And the competition is certainly tough. This does not mean there are no jobs; it is just that jobs are being chased by a large number of aspirants. Like the "lucky guys", you cannot afford to sit back and wait for employers to come to you. Since the jobs are there and employers, in their own interest, have to fill them up, why don't you try to get a job? If you do try, why shouldn't you get it? What should you do to get it? That is what we are going to discuss now.

But wait. Before we start on the job-hunt, let's make one thing very clear: be ready to receive a large number of rejections. Some organisations may not even reply or acknowledge your letter. It is part of the game and should cause neither disappointment nor frustration.

The job-hunt is a six-step operation: self-analysis; identification of the job-market; information gathering; strategy formulation; preparation of a resume; and the interview.

Self-analysis, an attempt to know oneself, is primary to career planning. Much before entering the job-market, you have to find answers to certain questions: What is your temperament? What are your interests? What is your ultimate aim? What are your achievements? What are your weak points? The entire exercise is for your benefit and has to be undertaken seriously, thoroughly and honestly. It involves a bit of

research on your background and psychology and your relationships with others. Some of the questions you can ask yourself are:

- What are the things you can do best and with what are they related: people, machines, nature (plants and animals), etc?
- Can you express yourself clearly to others?
- Can you lead a team and get work done or do you just follow directions and do things as told?
- When under pressure, do you manage to work normally or are you tense?
- Can you work fast with accuracy?
- Do you enjoy new ideas, people and situations or are you comfortable with known routines, people and places?
- Do you wish to work only in your own city or can you go anywhere in India or even abroad?
- Do you prefer a low-salaried secure job or a high-salaried insecure one.
- Are you a clock-watcher who likes a 10 to 5 job, or would you like a job which does not go by the clock?
- Do you love travelling or do you want to be tied to one place?
- With what type of people do you feel most comfortable—educated, illiterate, rural, urban, men, women, children, young or old?
- Do you want to work for a large organisation or a small one?
- What areas are you weak in?

If you answer these questions honestly and prepare an essay on yourself, you will be able to open up yourself. The exercise will help you analyse things important to you, jobs you are interested in and organisations where you should try to work. You will realise the kind of individual you are, and this will be invaluable later when you prepare your bio-data and appear for an interview. This inventory on yourself will help you answer several questions your prospective employers may ask in the interviews. The analysis will be a good memory aid to ensure that you do not forget important details about yourself.

After self-identification comes career awareness. You may not be having a clear idea about the various careers, nature of work and promotional prospects. Do not hesitate to discuss the subject with your relatives and family friends.

You should know that you are in the buyer's market. Being the seller of your services you are the weaker one. Therefore, be sure you do not concentrate on one type of career or job. Identify at

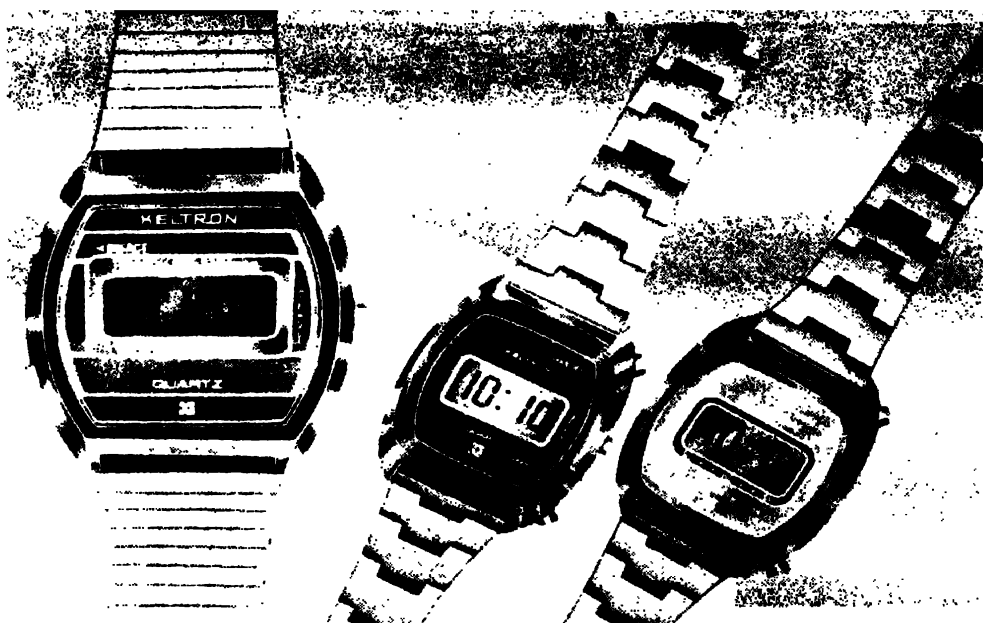
least three alternatives for which you are qualified and are willing to work. The more options you have, the better your chances.

The second equally important step, is **identifying the job market or job search** for which you have to look for advertisements in newspapers and magazines. Your job search has to be wide and not confined to one or two newspapers. Many advertisements which appear in *The Hindu* are not seen in the *Deccan Herald* and never in *The Hindustan Times*. *The Times Of India* and *The Statesman* do not carry the same advertisements. So you have to develop the habit of going through several newspapers and magazines from different parts of the country.

How should you go about doing it? No one can afford to buy all the newspapers and magazines. The best way is to visit a library once a week and go through files of newspapers and current magazines. You must go through ads and note down the posts vacant, qualifications needed, job to be done, names and addresses of employers, the last date for sending in applications and the names and dates of the relevant newspaper or magazine.

The third step in the job hunting operation is **collecting information on jobs** connected with your career. You must start from the important question, would you like to go in for a government job or a private one? Before you take the final decision, find out the major differences between the two and also the promotion prospects in each area. Once you have decided where you would prefer to work, your efforts should be to find out the major employers in that area. It would be better to find out as much as you can, about various employers. This part of the operation is rather difficult because the sources of information are not clear and known. Sometimes you will be groping in the dark and not much will be known. However, you should not be discouraged and, instead, talk to your relatives, friends, teachers and others who may know about employers. Knowing somebody who knows somebody helps, and can sometimes be the most effective way of collecting information. The point is that no single opportunity should be overlooked. More next time.

R. Thakur



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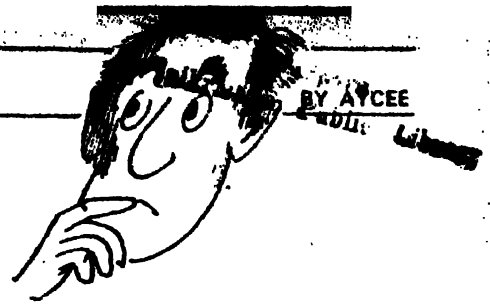
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TEST YOUR WORD POWER



Tick the word or phrase you believe is nearest in meaning to the key word:

1. **edage**: A: skill B: total amount C: old and wise saying D: a wise man
2. **ambidextrous**: A: cross-eyed B: good handwriting skill C: able to live both on land and in water D: able to use both hands equally well
3. **aroma**: A: pleasant smell B: warm emotion C: strong alcoholic drink D: strong odour
4. **bulwark**: A: a place where bulls are kept B: any person who works like a bull C: any person or thing giving strong support in time of need D: a powerful tractor
5. **contentious**: A: devious B: friendly C: ominous D: quarrelsome
6. **gaunt**: A: lean B: insane C: hazy D: bitter
7. **hiatus**: A: vain pride B: gap in a series C: strained relations D: a narrow inlet
8. **impunity**: A: freedom from violence B: compensation for loss C: freedom from punishment D: safety
9. **infuse**: A: to fill B: tempt C: show enthusiasm for D: please greatly
10. **invest**: A: to put (money in) B: examine C: receive property D: lend money
11. **pristine**: A: formal B: conservative C: shining D: unspoiled
12. **psychologist**: A: one who studies the development of man B: an expert in map-making C: one who makes a scientific study of election trends D: one who studies the science of law
13. **refrain**: A: to hold oneself back B: restore to original position C: get in the way of D: make less
14. **rendezvous**: A: meeting place B: point of no return C: secret hideout D: mixture
15. **resilient**: A: determined B: able to recover from trouble C: easy to solve D: coming back into use
16. **shun**: A: to avoid B: prohibit C: refuse D: put to shame
17. **throng**: A: to crowd B: strangle C: prosper D: disturb
18. **upheaval**: A: unexpected outcome B: great and sudden change C: difficult task D: noise and excitement
19. **vogue**: A: an increase in numbers B: a fashion show C: strong alcoholic drink D: popular favour
20. **weary**: A: easily broken B: strenuous C: tired D: sad

(Answers on page 73)

IDIOMS & PHRASES

1. **In sack cloth and ashes**: in repentance. After having lost his kingdom, King Porus went about in sack cloth and ashes for some time.
2. **To sail forth**: to rush out suddenly. They sallied forth in wave upon wave on the enemy.
3. **To savour of**: to have a flavour of. Your actions certainly savour of idealism and high-mindedness.
4. **At sixes and sevens**: in disorder. When Malti returned home, she found everything at sixes and sevens; her children had gone on a rampage in her absence.
5. **Jointly and severally**: collectively and individually. The members of a cooperative society are liable to pay back a government loan jointly and severally.
6. **To be a sheet in the wind's eye**: to be intoxicated or overdrunk. Towards the fog end of his life, the poet became a sheet in the wind's eye and soon died.
7. **To have a second string to one's bow**: to have a second alternative in case the first fails. A person who takes great risks must have a second string to his bow.
8. **To play truant**: to shirk duty, specially run away from school. Students often play truant to see a cinema-show.
9. **In twaddling clothes**: still immature. Many politicians still appear to be in twaddling clothes.
10. **To take time by the forelock**: not to let an opportunity slip. A resourceful man will always take time by the forelock.
11. **To be up and doing**: to be active. We should be up and doing if

- we want the country to prosper.
12. **Under the umbrella of**: under the patronage of. Many countries flourish under the umbrella of the US.
13. **To be an ulcer**: to be a corrupting influence. Bribery is an ulcer in the body politic of any nation.
14. **Under-board**: clandestinely; dishonestly. Business people make many transactions under-board.
15. **Vaporous webs**: fanciful ideas. You cannot build the hard work-a-day world with vaporous webs.
16. **Variegated view**: a scenic panorama. This window offers a variegated view of the landscape.
17. **Full of verbosity**: containing superfluous words. A minister's speech is most often full of verbosity.
18. **Of easy virtue**: of loose character. A prostitute is a woman of easy virtue.
19. **Vertebate writing**: writing characterised by strength, firmness or consistency. Carlyle is famous for vertebate writing.
20. **Verve, vim and vigour**: with full force. The new government should work with verve, vim and vigour to fulfil its pledges to the people.

QUOTABLE QUOTES

Give me a firm spot on which to stand, and I will move the earth.

Archimedes

A plausible impossibility is always preferable to an unconvincing possibility

Aristotle

Is't so small a thing
To have enjoyed the sun,
To have lived light in the spring,
To have loved, to have thought,
to have done?

Matthew Arnold

What's the use of worrying?
It never was worth while,
So, pack up your troubles in
your old kit-bag,
And smile, smile, smile.

George Asaf

If a man be gracious and courteous to strangers, it shows he is a citizen of the world.

Francis Bacon

There is no more miserable human being than one in whom nothing is habitual but indecision.

William James

Happiness: a good bank account, a good cook and a good digestion.

Jean-Jacques Rousseau
Irrationally held truths may be more harmful than reasoned errors.

T.H. Munley

The tree of liberty must be refreshed from time to time with the blood of patriots and tyrants. It is its natural manure.

Thomas Jefferson

Earth is here so kind (Australia), that just tickle her with a hoe and she laughs with a harvest.

Douglas Jerrold

Example is always more efficacious than precept.

Dr Samuel Johnson

Two things fill my mind with ever-increasing wonder and awe, the more often and the more intensely the reflection dwells on them: the starry heavens above me and the moral law within me.

Immanuel Kant

Advice to persons about to marry—Don't.

Punch

In giving freedom to the slave, we assure freedom to the free—honourable alike in what we give and what we preserve.

Abraham Lincoln

I might have been a gold-fish in a glass bowl for all the privacy I got.

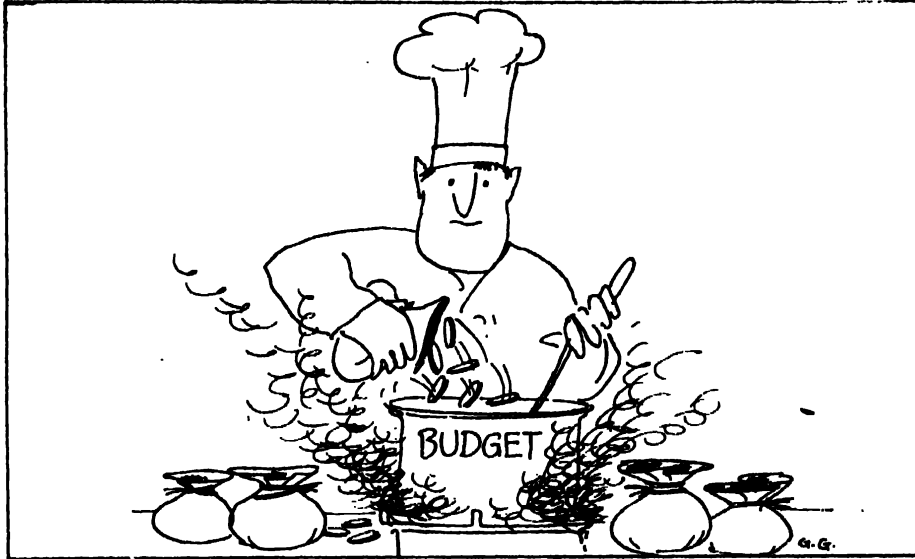
Seki

A falseness in all our impressions of external things, which I would generally characterise as the 'pathetic fallacy'.

John Ruskin

THE MAKING OF A BUDGET

BY BECO



On Mar 31 the Union Finance Minister will throw open the dreaded Pandora's box containing fresh budgetary provisions that might pinch the common man's purse. But how does the government frame the budget? Who is at the controls?

What is budget? How is it prepared and presented to Legislatures? How does Parliament exercise control over the annual budget? Answers to these topical questions would be interesting now that both the Central and state governments are going to finalise their budgets for 1985-86 shortly and present them to the Parliament and state Legislatures.

Concept

The concept of a budget is traceable to the 'Money Bag' available for expenditure in ancient Greek village republics. In Britain, the term 'budget' was used to describe the 'Leather Bag' in which the Chancellor of Exchequer carried to Parliament statements concerning the needs and resources of the government.

Gradually, it came to imply the documents relating to the government's income and expenditure plans. Budget thus represents the financial documents prepared by the government for balancing anticipated receipts and expenditure for a specific period, usually one year.

Though basically a financial plan, the budget is now considered as an instrument of economic planning. Economic developments are reflected in the budget in so far as it regulates the volume of taxation and national expenditure, in line with the economic policy of a nation. Again, the budget should meet all threats of inflation or economic recession.

Preparation

The Central Budget is presented to Parliament in the Budget Session which generally begins in February. State budgets are also usually presented in February and March, although traditionally there are no fixed dates for the purpose. Preparation of budget commences right from the beginning of July or August. Each government department prepares its own estimates, keeping in view the standing charges, expenditure on schemes under execution and on new schemes. The Finance Ministry examines these estimates in consultation with the Planning Commission and the ministry concerned, fixes priorities and allocates funds for various schemes in a rational manner. Consolidation of these estimates takes place in the Finance Ministry sometime in January. The

taken, in appropriate cases, before consolidation. The questions of policy and proposals regarding fresh tax levies are considered by the government at various levels and decisions are taken in the light of various factors operating in the country's economy. This is followed by preparation of the Annual Financial Statement—the budget and the Demands for Grants—for presentation to the Legislature.

The Budget Division of the Finance Ministry is primarily responsible for the preparation and submission of the budget, other than the Railway Budget. Every ministry has a finance division associated with it. These associated divisions are responsible for preparing the budget of their own divisions or ministries. Finally, the Budget Division of the Finance Ministry with the assistance of these associated divisions prepares the budget. The Budget Division takes care of various other functions which have a direct or indirect bearing on the budgets of both Central and state governments.

The Planning Commission plays an important role in budget-making. The Commission formulates the Five Year Plans, and separate plans for each state and for each Union territory are also formulated. Annual Plans are also prepared. The size of the plan and the priorities are determined, the financing pattern is decided and the quantum of the Central assistance to each state for Plan financing is indicated. The states also indicate the amount of additional taxation they would be prepared to undertake in order to meet the Plan obligations. Similarly, Plan items in the Central Government Budget are decided in consultation with the Planning Commission. The result of all these consultations and discussions is reflected in the Central Budget as well as in the state budgets. A special document, named, 'Plan Budget Link', indicates the above parameters in detail.

Documents

Apart from the Finance Minister's speech, several vital documents are laid on the table of the House. They are: (a) Budget document, indicating estimates of receipts and disbursement; (b) An 'Explanatory Memorandum' on the budget. This memorandum provides short notes in respect of estimates of receipts and disbursements in each case; (c) The Finance Bill, incorporating changes made in respect of taxes and related administrative matters; (d) A memorandum explaining the provisions in the Finance Bill; (e) The Plan-Budget link, showing the amount of expenditure on Plan projects included in the budget; (f) Ministry-wise demands for grants; (g) Defence services estimates;

(Continued on page 14)

INSURGENCY ON THE RAMPAGE

BY UDITA CHANDRA

The politics of insurgency has been spreading its tentacles throughout the nation. But its grip has never been tight enough to wring out the strong sense of unity among the Indian populace.

Insurgency is defined as the act of rising in open rebellion or revolt against the established authority. In the field of politics, insurgency is the act of a part of a country demanding its right to form an independent, sovereign state of its own, free of the influence and control of the established government of the country. The case of USSR is unique in that it gives its units the constitutional right to freely secede from the USSR.

Since 1860 when, by a resolution, the state of South Carolina declared itself seceding from the US, insurgency has been a problem faced by many countries. In England, the Irish problem has been raging for four and a half centuries with the Irish Republican Army (IRA) demanding the union of north and south Ireland, free of British control. In Sri Lanka, the question of a separate state demanded by the Tamil minority, and the violent retaliation by the Sinhalese majority has led to the nation being completely spilt along racial lines.

In India, the problem of insurgency is as old as the nation itself. There are calls for separate states from the north-east, fighting for freedom from the brown colonists of New Delhi. Punjab poses one of the most serious problems facing India today. In the south, some symptoms of the same sickness were witnessed, but fortunately, they never gained momentum.

In the north-east, insurgency has, to begin with, been a result of the divide and rule policy of the British colonists, who deliberately isolated the tribals of the north-east from the national mainstream. After independence, the problems of partition kept the national leaders preoccupied and the north-east, which was not emotionally integrated with the rest of India, felt more isolated and alienated. There was a 'crisis of identity' among the people of the north-east. It is alleged that various Maoist organisations fomented the discontent and encouraged secessionist tendencies among the tribals.



Spreading terror: Revolting by indulging in nefarious activities.

Even today, the north-east is in a ferment. There is a conflict between the traditional cultures and the forces of change that manifest themselves most conspicuously in the form of agitational, often violent political activity.

The movement for secession that started in Nagaland, with the Naga tribes taking arms in 1956 under the Naga National Council led by Z.A. Phizo who established an underground government, soon spread to the other volatile states and Union territories in the north-east. Though the army action is said to have crushed the movement, pockets of resistance still exist. The Shillong accord of November 1975 has been rejected by Z.A. Phizo and the other charismatic leader of Nagaland, T. Muivah of the National Socialist Council of Nagaland (NSCN). The dominant presence of the army hardly deters the rebels from mounting hit-and-run attacks.

In Manipur, the People's Liberation Army (PLA), a Maoist organisation, and the People's Revolutionary Party of Kangleipak (PREPAK), a Marxist-Leninist group, both demand the freedom of Manipur from the control of the Indian Government. The PLA guerrillas are allegedly trained in China and Tibet, and on their return indulge in shooting, arson, bank robberies and kidnapping.

Mizoram, still a Union territory, also presents the same problem to the Government of India. In 1966, the insurgent Mizo

Army, under the leadership of the Mizo National Front (MNF), 'liberated' almost the entire Union territory and held it for several days before the massive Indian Army intervention gradually pushed them back. 'President' Laldenga was the leader then, and to date he remains the most crucial element in Mizo politics. Since the peace moves broke off on Jan 20, 1980, when a Home Ministry note accused him of being "intransigent", Laldenga has been living in Britain and criticising India constantly.

In Tripura, extremist activities have been increasing and insurgency has been a result of the inability of the Indian Government to settle the tribal and non-tribal disputes. The Tripura National Volunteer force (TNV) and its various factions are spearheading the secessionist movement in the state. The extremists visualise themselves as 'liberators' and see themselves as freeing Tripura from the "colonial backed refugee government and foreigners."

The self-styled Supreme Commander of TNV, Bijoy Hrangwal, who escaped in 1982, is still operating from his headquarters in the Chittagong district of Bangladesh.

In Assam, the movement against foreign nationals has sometimes taken on the colours of a secessionist movement. Though the majority of Assamese still consider themselves Indian, ambitious politicians steer the course of the movement dangerously close to secessionism. The term 'aliens' that once referred to illegal immigrants from Bangladesh, soon came to refer to even non-Assamese Indians.

In 1960, Madras state was also shaken by the politics of secession. The DMK and the Nam Tamil jointly organised a campaign throughout the state to demand secession of Madras from India and the creation of an independent, sovereign state of Tamil Nadu. The DMK, sometime later, even proposed that the states of Madras, Andhra Pradesh, Mysore and Kerala should secede and form an independent 'Republic of Cravid Nad'. They did not gain much support outside Madras.

The agitation by the DMK continued, but in its manifesto on the eve of the Lok Sabha elections in 1977, there was no mention of secession, though there was a demand for state autonomy, which, they asserted was neither "secession-oriented nor anti-national".

Though the first demands for the creation of "Khalistan" were heard at the time of independence, voiced by the Akali Dal

later been reduced to a call for greater state autonomy. It is only during the last three years that Punjab has become the scene of a series of agitations. A communal and extremist movement started in Punjab and soon degenerated into secessionist and anti-national activities. Under Jarnail Singh Bhindranwale, there was a systematic stockpiling of arms and ammunition. The secessionist movement received the support of a number of groups operating from abroad, and finally the army had to be called in to carry out Operation Bluestar and Operation Woodrose. While the calls for secession and the creation of Khalistan are heard loudest and clearest from Sikhs settled abroad, it is a fact that extremist activities in Punjab are still continuing.

While the Punjab is of utmost concern, the situation in the north-east is also alarming, with the efforts of the guerillas to secure a meaningful coordination among the rebels, finally appearing to bear fruit. The PLA and the NSCN have come closer under one unified command. The NSCN foreign secretary has set up links with PRE-PAK, while the MNF is training TNV volunteers. The movement is slowly turning towards Maoism, thus broadening its ethnic base.

But all is not lost—there is some hope in the form of the visit of the MNF leader Laldenga, who was in New Delhi at the invitation of the late PM, Indira Gandhi. He

Policy Planning Committee G. Parthasarthy Back once again from his short interim trip to London, Laldenga has reaffirmed his desire for a solution. An accord is being worked out. If successful, it will provide the much-needed breakthrough in solving the problem of insurgency in the north-east.

Secessionist movements have always proclaimed their demand for a right to "self-determination", which is given to every nation. The genuineness of this demand is debatable. What actually constitutes a nation? Can the Sikhs claim to be a separate nation when they are said to be the militant protectors of the Hindu faith?

All demands for secession have been made by regional parties and regional political leaders—be it the Akali Dal or the DMK. All talk of economic exploitation, discrimination against a particular community and racial differences are only political gimmicks used to gain a mass base. Nothing can fire the imagination of a youth more or earn his loyalty better, than a call to fight for justice, and to protect his people from the 'colonists' of New Delhi. Secessionism in India, is more or less a purely political phenomenon used by local politicians to gain support.

In India, foreign powers interested in destabilising the country have involved themselves in the politics of insurgency. The weapons used by the extremists have foreign markings on them. Pakistan has

Government's attempts to curb and insurgency. A pro-Phizo delegation is said to have visited China last year for procurement of arms.

Though some states may feel that they would be better off outside the Union of India, this is not logical. Ours is a planned, interdependent economy where the development of one state is linked and is dependent on the development of the others. No state is self-sufficient. Foreign powers, so eager to aid the insurgents now while they have a vested interest, may not be so enthusiastic once India is stabilised, or the federation is broken up. These states could hardly create viable economies and defence would be their eternal problem.

The reorganisation of states on linguistic lines may well be taken as a major cause for insurgency. The creation of linguistic states has created sub-national feelings and parochialism. Each state is gradually becoming isolated and less tolerant of other states.

India has traditionally been known for its diversities. India's greatness lies in the assimilation of many races and religions. The country's eternal problem has been the search for unity in diversity and the building of an integrated civilisation based on the higher values of life like mutual tolerance, peace and harmony. India may have diversities, but we are one nation. ■

THE MAKING OF A BUDGET

(Continued from page 12)

(h) Economic classification of budget. The aim of presenting this classification is to assess the economic effects of government activity.

Adoption

Before adoption by the Parliament, the budget has to be presented to the Legislature. It is discussed in Parliament and voting on the demands of various ministries takes place. The Appropriation Bill is then put up for consideration of the House. Finally the House considers the Finance Bill. The Finance Bill which indicates the proposed changes in taxes and other matters is introduced in Parliament; on the same day the budget is presented. The Finance Bill is generally referred to a select committee of the House. After the committee's report is received, the Finance Bill is discussed clause by clause. During these discussions on demands for various ministries and the Finance Bill, members place their views before the House and try to convince and justify their assertions.

A lot of uncertainty exists before the presentation of the budget. In the backdrop of existing economic conditions, every section of society anticipates the budgetary measures in its own way and

assesses their impact upon its day-to-day living. Allocation of resources made through the budget and the raising of revenues through new taxes creates an adverse effect upon some while it is beneficial to others. Hence the budget generally becomes an object of both praise as well as ridicule. However, the point has to be appreciated that in a democratic set-up, the budgetary process has its own limitations, even if it is desired to make optimum use of the financial resources.

Parliamentary Control

A budget may be well formulated, but if there is no effective financial control, the whole scheme of budgeting might go wrong. This requires the introduction of discipline and the establishment of a certain degree of rigidity in the budget execution. Hence, various types of controls including financial regulations are exercised. These financial regulations are initially allowed in the form of general orders or executive instructions which are generally consolidated in the form of codes and manuals. Besides, the Parliament exercises control over the budget through its financial committees viz, the Public Accounts Committee, the Estimates Committee and the Committee on Public Undertakings.

The main function of the Public Accounts Committee is to ensure that the moneys disbursed were legally available and were used properly and that the expenditure was properly sanctioned. It also looks to various other aspects of expenditure such as prudence, economy and financial propriety. The Estimates Committee draws its members from the Lok Sabha, and their term of office is generally one year. The main objectives of the Estimates Committee are to ensure economy and efficiency in administration. It is expected to see that the money is well laid out. If a close examination reveals that a certain policy is defective or that its implementation involves wastage of funds, the committee can suggest alternative policy for consideration by the government.

The Committee on Public Undertakings, whose members are drawn from both Houses of Parliament is a relatively recent creation. The scope of the committee is mainly to examine the reports and accounts of public undertakings and to assess if these organisations are being managed in accordance with sound business principles and proven commercial practices. These committees are contributing towards exercising control over public expenditure, in their own way. ■

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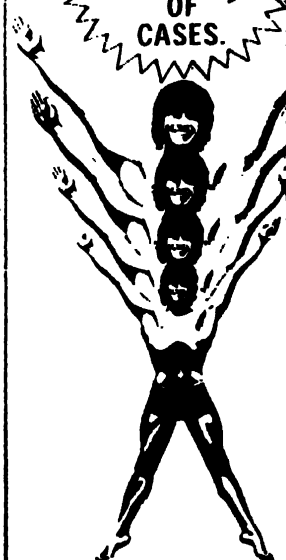
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The Front Door To The Civil Services

BY LALIT VARMA, IAS Topper, 1983

The rat race for the Civil Services continues, unabated. You may be a runner too, sooner or later. So here's good luck to you and more from a topper's pen who elaborates on the method of preparing and taking the Civil Services Exam, in the first of a series of four articles on the subject.

Every year the UPSC holds exams for recruitment to various Civil Services. The competitive exam is conducted in three stages: (i) Preliminary Exam [Prelims] (objective-type) for the selection of candidates for the Main Exam; (ii) Main Exam; and (iii) Interview (personality test). Final ranking is based on the combined marks obtained in the Mains and interview.

Prelims

It consists of two objective-type papers (multiple-choice questions mainly) that carry a maximum of 450 marks: Paper I—General Studies, 150 marks; Paper II—one subject to be selected from the list of optional subjects (Agriculture, Botany, Chemistry, Geography, History, Law, Psychology, Zoology, etc), 300 marks.

Question papers are set both in Hindi and English. The course content of the syllabi for the optional subjects is of degree level. The government notification gives the detailed syllabi as well as a few sample questions. The concerned issue of *Employment News* can also be consulted for the same.

This exam is meant to serve only as a screening test and the marks obtained in the Prelims are counted only for admission to the Mains and not for the final ranking. Yet, the Prelims are not to be taken lightly. Out of nearly one lakh applicants for the Prelims only about 10,000 are admitted to the Main Exam.

In the multiple-choice, objective-type questions a number of short questions are asked and the candidate has to choose the correct answer from four or five alternatives given. All questions are compulsory in the multiple-choice paper and, since the questions are generally drawn

from the entire course the candidate has to be thorough in his subjects.

In general these papers test the candidate's precision and may also test his ability to distinguish between similar terms or ideas, and, in some papers, his ability to make estimates rapidly.

Apart from knowing your subject thoroughly, the best way of preparing for this kind of exam is to repeatedly practise on actual test papers. It is essential to be aware of the type of questions asked and the answers supplied so that you know what to expect. For example, though the General Studies paper covers practically every subject area, a careful study of the old question papers reveals that maximum questions are asked in General Science, Mental Ability, General Knowledge, Indian History and current events. Accordingly these areas should be given more weightage while preparing for the exams.

The following may be observed while preparing for or even answering one of these papers in the exams:

- Speed is essential, though not at the cost of accuracy. Time is limited. Work steadily and with full concentration, without wasting time on a doubtful, controversial or ambiguous question. Come back to these after having scored the answer for clear-cut questions.

- Since results depend on the number of correct answers, there is no point in leaving any question unanswered. Sometimes it is easy to eliminate unlikely and ridiculous responses and mark the most probable response as the correct response.

- Besides reading books, newspapers and magazines to increase depth and width of knowledge one must indulge in group or solo brainstorming in order to generate likely, anticipated questions.

- Time management is essential to distribute time equally over various subjects and topics. While preparing for the Prelims the Mains must also be kept in mind so that preparations are simultaneous for both. This becomes more important in the light of the fact that the time gap between the Prelims results and the Mains is hardly 90 days.

- One must be on the lookout for questions which differ from the usual form. In most questions one has to just decide which one of the four answers is true. But, among these questions, there may be a few for which the right answer might consist of a combination of two or more alter-

natives, e.g.,

Which of the following sequences of events are true?

1. Sequence X
2. Sequence Y
3. Sequence Z
- A. 2 only
- B. 2 and 3 only
- C. All
- D. None

Another tricky variant is in the form of 'except' questions which reverse the usual form and ask you to identify the incorrect statement among a number of correct ones, e.g.,

* All the following data about Akbar is true except...

A candidate working with speed and used to one form of questions may mark the wrong response in such odd questions even if he knew the right answer. Similarly one must be on guard for the tricky words—best, the only, odd, least, most likely etc, and also for the particular condition that may have been specified in the question.

- Scoring on the answer sheet should be done meticulously and as per given instructions. Make sure you make the right kind of mark and in the right place. It is preferable to use a ruler on the answer sheet which can be moved as the questions are answered so that you do not lose the right place where the answers are to be marked.

Main Exam

The Mains are held sometime in November. Candidates are admitted to the Mains on the basis of the Prelims results (declared in August/September) of that year. The number of candidates to be admitted to the Mains is about 12 times the total number of vacancies to be filled up in that particular year (nearly 800 per year).

The Mains include a written exam of eight conventional essay type papers, each carrying 300 marks:

Paper I (300 marks)—One of the Indian languages included in the Eighth Schedule of the Indian Constitution.

Paper II (300 marks)—English.

Papers III and IV (300 marks each)—General Studies.

Papers V, VI, VII and VIII (300 marks each)—Any two subjects to be selected from the list of optional subjects. Each subject will have two papers.

The Indian language and the English
(Continued on page 74)

ESPIONAGE

NET AROUND SPY-RING

The fact that most of the secret projects of vital importance to India have, all along, been nothing but open secrets, (thanks to spy infiltration into top-most government offices) has immensely frightening connotations. And the report that several Indians are a part of the espionage network operating in the country is even more terrifying. On Jan 17, Rajiv Gandhi informed Parliament of the existence of a spy network within the country with wide ramifications. Days later, details started pouring in, of the nexus between counter-intelligence agencies and their Indian 'moles'. Among these moles are reportedly P.C. Alexander's private assistant and three others in the PM secretariat, and two other low ranking officials from the President's office. They were alleged to be supplying photostat copies of top-secret documents to one Coomar Narain the alleged kingpin of the spy ring in India. He is the Delhi Regional Manager of a Bombay-based trading and manufacturing firm T. Maneklal Manufacturing Co. Ltd whose Managing Director Yogesh Maneklal was arrested following Coomar's confession that he had been spying for 25 years and had contact with French, Polish, East German and Russian diplomats. The French diplomat has already been identified as Alain Bolley, a defence attache in the French embassy. He was recalled on the advice of the Indian Government as was French Ambassador Serge Boidevaix. The name of the Polish diplomat figured in the Press but the External Affairs Ministry is neither confirming nor denying his recall. Nothing is known about the identity of the other Soviet Bloc spies.

It is still unclear what made the intelligence suspect the existence of a spy ring. Presumably, it was the conspirators who grew careless. For a long time, government officials were passing on top secrets to Coomar. When he was arrested and his Hailey Road office raided, trunkloads of photostated classified documents were seized. Apart from this, 300 top secret documents on combat and laser weapons, nuclear research projects, counter-intelligence and defence preparedness reports as well as policy papers on India's relations with Sri Lanka and Pakistan have also been seized from the premises of various suspects. India's secret diplomatic ciphers were leaked out too—matters unknown even to Cabinet ministers.

It is believed that France basically sought information on India's defence procurement and may have made available to other countries additional information received in the process. The French decision to withdraw the ambassador is also an official admission of France's participation. The role of the Soviet-bloc diplomats is still unknown.

Dr Alexander, too, tendered his resignation soon after the disclosure about the participation of his staff in the spy scandal which was accepted by the PM, albeit with regret.

The startling revelations of this espionage have highlighted the laxity prevailing in offices of bureaucrats. The leakage of information of such vital importance to the country, in order to strengthen foreign hands, is a matter of grave concern. Immediate tightening of security is the need of the hour to prevent the likes of it occurring again. Draining of national secrets can prove hazardous for the country's well-being.

ANTI-DEFECTION BILL

TIMELY ANTIDOTE

The incidence of sullied politicking of defection and deception which had of late become an undesirable but integral part of Indian politics is likely to abate to quite an extent, though perhaps not totally disappear from the political scene. The passing of the Constitution Amendment Bill on Jan 30 puts a ban on defections in both Houses of Parliament and the state Legislatures. This is the 52nd Amendment to the Indian Constitution and its main objective is to check the scourge of unprincipled defections. It leaves no scope for being challenged in a court of law, unlike ordinary anti-defection legislation which may be challenged under Article 19, which provides Freedom of Speech and Expression and the Right to Form Associations or Unions among other rights, or under any other provision of the Constitution.

According to this Bill a member of the legislature will automatically lose his seat if he voluntarily resigns from the party on whose ticket he was elected formally, in accordance with its rules and procedure. However, the accompanying clause which laid down that a member would incur disqualification if he were to be expelled from the party to which he belonged was dropped.

The Bill also defines a split and merger. It states that a split shall be deemed to have occurred in a party if no less than one-third members, of the concerned House, belonging to that party break away from it. There will also be no disqualification in the event of a merger where a member's original party merges with another and he claims that he along with other members of the original party have become members of the new party formed; neither will there be any disqualification if he and any other members of the original party opt to function as a separate group while rejecting the merger. The merger would be valid only if it received the approval of two-thirds of the House. The amendment also provides for conscience vote, i.e., a member voting against the party whip or abstaining from voting will incur disqualification if such voting or abstention is not condoned by the political party within 15 days.

As defection has all along marred the basic structure of India's parliamentary democracy the Bill may well prove to be the first step towards cleansing public life. However, the Bill, like most laws of the land has loopholes; for instance, it does not specify the necessary action to be taken in case there is suspicion that a government is losing its majority, particularly when the House is not in session. The Opposition, while backing the Bill, has also expressed concern over the fact that the authority for deciding questions of disqualification on grounds of defection will be vested in the Chairman or Speaker of the House concerned as the Bill may establish the dominance of the PM as well as the Opposition leaders. Coming at a time when the Congress(I) is the undisputed force in the Lok Sabha this amendment should also secure the Rajiv Gandhi rule at least till the end of his official tenure. But, all in all, it will undoubtedly succeed in curbing the politics of opportunism.

INDO-LANKAN RELATIONS

STALEMATE EXISTS

India appears to have grown tired of being patient and finally retaliated in kind by capturing a Sri Lankan navy boat, with seven crewmen, that had intruded into Indian territorial waters and was engaged in harassing Indian fishermen. The patrol boat had, after firing at the fishermen, seized the catch and equipment of about 20 vessels and was consequently seized by the Indian coast guard vessels on Jan 11, 1985. Earlier, on Jan 7 two Indian fishermen had been killed by the Sri Lankan patrol boats when they were in side Indian waters, on the pretext that they were Tamil militants. This had resulted in an intensified vigilance by the Indians.

The attack resulted in the expectedly heated protest by Colombo for the immediate release of the captured boat. But, for once, New Delhi emerged with an upper hand and was prepared to negotiate only on its terms, viz the release of 17 Indian fishermen facing persecution in Sri Lanka for alleged poaching, and compensation for loss of life and property to the families of fishermen killed in similar encounters.

Meanwhile the increasing student militancy in Sri Lanka as well as the effort to colonise the predominantly Tamil north with settlements of Sinhalese families, in an attempt to reduce the Tamil majority and create local support for security forces, further antagonised the Tamil guerillas. They demonstrated their displeasure by blowing up a Colombo-bound train which resulted in the death of 34 people including 23 soldiers. On the other hand the atrocities on Tamils continued unabated. In a gun battle between Tamil militants and the army 17 militants were killed while in another incident Indian fishermen were injured in firing within the Indian territorial waters.

The PM expressed his concern over the hostile stance adopted by Sri Lanka and said that even though the ethnic issue is an internal problem of the island, the influx of refugees into India and their hardships, is India's concern as well. While Sri Lanka appears to favour a military solution,

...role have not been finalised. If an agreement is reached on the vexed foreigners issue it will be coupled with a new problem for the Centre—the problem of reinstating the multitude of stateless persons in Assam.

TAMIL NADU

RETURN OF THE NATIVE

In M.G. Ramachandran's absence, Tamil Nadu became a virtual arena for the power wars between the AIADMK parliamentary party members resulting in the shredding of the party fabric. And MGR, who returned to India on Feb 4, after a three-month-long treatment in the US, has ahead of him the unenviable task of sewing it together into some semblance of dignity.

Dissensions among party ranks first appeared when the Commercial Taxes Minister and leader of the AIADMK youth wing S. Thirunavukkarasu was deprived of his portfolios of excise, handlooms and textiles and instead given the portfolio of the nutritious noon meal scheme. The change was effected through a letter from MGR to the Governor, S.L. Khurana—rather surprising because MGR was, at the time, incapable of moving. The outraged Thirunavukkarasu immediately tendered his resignation though he did not relinquish his party membership. But what ultimately led to the split in the party was the removal of Jayalalitha, the deputy leader of the parliamentary party, from the post, once again allegedly under the orders of MGR. The ex-actress immediately lashed out at the conniving coterie comprising the state Finance Minister, V.R. Nedunchezhiyan, party General Secretary P.U. Shanmugam, state Information Minister, R.M. Veerappan and V.N. Janaki, MGR's wife. And keeping into consideration Jayalalitha's role in the Lok Sabha elections and state Assembly poll campaigns, as well as the favours her political mentor MGR had bestowed upon her, the move does seem as an attempt to undermine the considerable power she wielded in the party in MGR's absence. The loyalties of the party members now lie divided among those who support Jayalalitha and those supporting the Nedunchezhiyan—Shanmugam—Veerappan clique. To add to the slight, Jayalalitha was not even allowed to meet MGR upon his return.

Now that MGR is back home and decidedly showing marked improvement in his health the swearing in of his AIADMK Ministry is imminent. What he decides to do about his erring party members is, at the moment, anybody's guess. But surely now that the cat is back the mice will have to stop playing their own games.

PUNJAB

PERPLEXING AS EVER

Punjab remains a vexatious issue even for the Rajiv Government. The appointing of a high-level ministerial committee to study the various facets of the Punjab tangle was followed by extensive discussions within the Central ranks. The Centre adopted a rather conciliatory attitude to begin with and was quite prepared to hold early elections in the state with a view to restoring popular government, in full awareness of the fact that the Akali Dal itself may be voted back to power. The Centre wanted to make sure that the Akali Dal would be prepared to allow any other elected party to govern the state. Apart from this the Centre was also ready to consider the release of Dal and SGPC leaders detained under the National Security Act (NSA), provided no criminal cases were registered against them. The Akali Dal, on its part, was enthusiastic about these proposals as it expected to secure a mandate to rule.

Soon dissensions started, following the Haryana CM, Bhajan Lal's suggestion to reunify Haryana, Himachal Pradesh and Punjab to constitute a single state. This, the CM thought, would automatically resolve the disputes over the river waters, territory and also Chandigarh. The move was acclaimed by both Haryana and Punjab but promptly rejected by the Akali Dal ad hoc executives and the SGPC.

To worsen matters further, an attempt was made on the life of the Akal Takht head priest, Jathedar Kirpal Singh. On Jan 16, Kirpal Singh along with two of his *sawadars*, was seriously injured when shot by three unidentified assailants.

Installed as head priest of the Akal Takht in 1982, Kirpal Singh is among the select band of Sikh leaders openly opposed to terrorism. He had, at an earlier stage, even banned the entry of arms into the Golden Temple complex. The attempt on his life was probably made with the view to increase the rift between the Centre and the state and sabotage the possibility of resumption of talks. Upon his recovery, Kirpal Singh reportedly indicated that the head priests were prepared to play the role

and mediator to the Punjab problem. This statement was later quoted by him. The Akalis are persistent in their demands for the release of the detained Akali leaders "to create a congenial atmosphere", as also consideration by the Centre to the Anandpur Sahib resolution. This resolution, according to the head priests, has been grossly misinterpreted by the government and the government should now refer to the specific clauses it objects to so that those can be specifically considered by the priests and Akalis.

The Centre had however, prior to these latest developments, been resolute in its stance that the Akalis unequivocally condemn terrorism and give assurance that a solution will be found within the framework of the Constitution. The Anandpur Sahib Resolution had been described unconstitutional by the government. The Centre has not as yet expressed its opinion with regard to these developments. Meanwhile, a substantial part of the country will go to the polls on Mar 2 and 5. Punjab will, once again, be conspicuous by its absence.

VISITS

CULTIVATING FRIENDSHIPS

It is heartening to note the PM, even while taking stock of domestic problems, is still finding time to cultivate friendship with foreign countries and nurture the existing ones. Obviously believing in building bridges not walls, Rajiv's efforts to enlist the goodwill of these countries will undoubtedly prove beneficial in the long run.

The President of Argentina, Raul Alfonsin, was among the first to respond to a friendship call from India. His visit coincided with the six-nation summit in which he participated. Talks with India proved beneficial for both countries. Wide ranging agreements on economic cooperation as well as an agreement for cooperative efforts in science and technology, were signed. A programme for cultural exchange was approved and the decision to set up a joint commission with the view to strengthen bilateral relations was also finalised. Both countries welcomed the furtherance of mutual cooperation and the marked improvement in bilateral relations in practically all fields. India, on its part, extended its support to Argentina on the Malvinas Island issue.

The King of Bhutan arrived in New Delhi on a four-day state visit starting from Feb 1, 1985. King Jigme Singya Wangchuck reaffirmed Bhutan's complete trust in India and expressed satisfaction over the growing economic cooperation between the two countries. The issues discussed during this visit ranged from regional issues to bilateral cooperation in wide-ranging fields. India's assistance to Bhutan's developmental projects also featured in the talks.

RBI REPORT

PROPHECY FOR IMPROVEMENT

The Report on Currency and Finance, 1983-84, submitted by the RBI indicates improvement in the economic trends during the current financial year. The price situation in 1984-85 (April-March) has shown distinct signs of easing. Also the extent of the rise in prices is likely to be much smaller than the rise recorded in the preceding year.

It is estimated that the industrial growth for this year may touch the 7-8% mark compared to the 5.5% growth it achieved in 1983-84. The rate of increase in non-food credit at nearly 8% from March to November 1984 as against 5% in the corresponding period in 1983 reflects this acceleration of industrial growth.

In contrast to the discouraging trends in the price situation in the early part of 1984, the prospects for containing the price rise within a range considerably lower than that in 1983-84 have brightened. In fact the price rise up to Nov 17, 1984 during the current financial year works out to 5.4% on a point-to-point basis or 7.9% on an average basis compared to the 9.3% and 8.8% during the corresponding period of 1983-84. Even on the assumption that the price rise during the remaining part of the year would be as large as it was during 1983-84, the extent of price rise for the full current year would be much smaller than in the preceding year.

The industrial production during the first half of 1984-85 (April-September) registered an increase of 7.2% against 4% in the same period in 1983-84. Manufacturing has risen by 5.5% compared to 3.7% in the last financial year. Mining and quarrying has risen from 9.3% to 10.7% while electricity from 2.7% to 13.5% primarily due to significant improvement in power generation. The performance of the infrastructure industries has been highly impressive and this will ensure acceleration of industrial growth during 1984-85:

In the agricultural sector, output of kharif foodgrains is likely to be sus-

(Continued on page 24)

CURRENT EVENTS

US-USSR

OF STAR WARS & WEAPONS

The one agreement that Soviet Foreign Minister Andrei Gromyko and US Secretary of State George Shultz reached at Geneva was to talk some more. The agreement was that the US and the USSR will conduct three series of negotiations simultaneously and the single negotiating teams of each nation will be divided into three sub-groups. While one will discuss long-range strategic weapons (nuclear warheads carried by inter-continental missiles or launched from submarines or bombers), another will bargain about intermediate range weapons (especially the Soviet SS-20 missiles and NATO's Pershing II missiles), and the third will discuss defensive systems including America's Strategic Defense Initiative (SDI), anti-satellite (ASAT) weapons and Soviet ground-based systems like anti-ballistic missiles (ABMs), radars and anti-aircraft devices. The most contentious issue will be the third one, which is also called President Reagan's star war programme and which seeks to intercept and destroy nuclear missiles. While the Americans were happy that Kremlin had agreed to resume what in effect, is the START (Strategic Arms Reduction Talks) and INF (Intermediate-range Nuclear Forces) talks, which the Soviets had walked out of in Nov 1983, when NATO had begun to deploy nuclear missiles in Europe, the Russians too are pleased because Washington had wanted to keep the offensive and defensive systems separate. The Russians had managed to get the US to put star wars on the same general forum as the offensive weapons.

Immediately after the talks, however, it became apparent that it was easier to talk than to get anything done, and even the talks may get off at a dead end. In separate television interviews, US Defence Secretary Casper Weinberger ruled out not only the possibility of stopping star wars research but also any ban on deployment of the weapons that this research may produce, and Shultz said that it "remained to be seen" what would happen if progress was made on missiles but not on anti-missiles. On the other side of the iron curtain, Gromyko in a similar TV interview declared that without reaching a simultaneous accord on all three directions, "there can be no advancement of what was agreed upon in Geneva". While not demanding an immediate halt to star war research or a total ban on the deployment of space weapons, he said that such a ban was the goal of the Soviets.

While such discourse was going on a Pershing II missile which had just arrived for deployment in West Germany, accidentally exploded, killing three American servicemen and injuring 16 others. Luckily, the missile was not armed and there were no nuclear warheads in the immediate vicinity. While this accident led to questions about the reliability of the Pershing II, many similar accidents having occurred during the time of testing in 1982 and 1983, it added fuel to the fire of European pacifists who do not want such missiles in their country. The Belgian Government is already split on the question of missile deployment in Belgium and the Belgian PM made this clear to Reagan during his visit to Washington on Jan 15. Early in February, the Greek PM Papandreu said that although Greece was a member of the NATO, its decisions were not binding on Greece and asked America to remove its nuclear weapons from the country.

On the Russian side, too, a mishap occurred in January. A Soviet cruise missile apparently got away and after flying over parts of Norway crashed in Finland. Weinberger stated that the "run away" missile had been shot down by the Soviets themselves and this means that the Soviets themselves have a strategic defence system of their own.

REAGAN ADMINISTRATION

DEFENCE BUDGET BELLOWS

Ronald Reagan was sworn in as President of America for a second term in an elegant ceremony. His second term agenda comprises three major issues: arms control, tax simplification and the federal budget system. The Shultz-Gromyko meeting in Geneva showed his anxiety to begin talks in the field of arms control. No less important is the budget. If no cuts are made in the current spending, the deficit will grow from \$218b this year to \$235b in 1988, and the

national debt will rise to \$2.5 trillion. However, Reagan appears to be relaxing at the moment since the economy has picked up since last summer. Interest rates fell to 10.5% in late January. Reagan's goal is to reduce the annual deficit to 2% GNP (\$100b). As he has ruled out tax increases or cuts in defence and social security, cuts have been suggested by Budget Director David Stockman in well-entrenched entitlement programmes like medicare, agricultural subsidies and student aid. However, powerful lobbies are against such cuts. The Senate Republican leaders, on the other hand, favour a freeze on most federal programmes, including defence and social security. The defence budget has been growing at the rate of 8.3% over the past four years. The proposed \$313b budget for the next year is expected to come under special scrutiny by Congress.

Meanwhile, Reagan had begun to shake up his administration for the second term. The Treasury Secretary, Donald Regan, has been made the White House Chief of Staff, while James Baker, the outgoing White House Chief of Staff has been given Donald Regan's former post. Edwin Meese has been nominated Attorney General. The Energy Secretary Donald Hodel will move to the Interior Department and White House Personnel Director, John Herrington will take over as Energy Secretary. William Bennett has been given the post of Education Secretary. Vernon Walters, the former Deputy Director of the Central Intelligence Agency (CIA) will replace Jeanne Kirkpatrick as the US Ambassador to the UN. Kirkpatrick will return to teaching and writing.

In Soviet Russia, the sudden postponement of the Warsaw Pact's planned summit meeting in January raised speculations that President Chernenko's health problems may be more than serious. The meeting was to be held in Sofia, Bulgaria around Jan 15. Western Kremlin-watchers even speculated as to whether he was still alive. Chernenko has not been seen in public since Dec 27. Early in February, an official spokesman, while declining to comment on Chernenko's state of health said that he was taking a winter holiday near Moscow.

JAPAN

DIPLOMATIC TRIUMPHS

It was a month of diplomatic triumphs for PM Yasuhiro Nakasone. He followed West German Chancellor Helmut Kohl and British PM Mrs Thatcher as an equal in the procession of Western allies meeting with President Reagan. At Los Angeles, therefore, Japan's importance as an emerging global power was felt. The meeting was the fifth in two years between the two leaders and was dominated by two main issues—trade and arms control. The US has a trade deficit of \$35b with Japan and has a growing market access problem. However, Nakasone took the initiative and said that he was determined to solve the trade problems and had set up a new seven-minister committee, which includes three foreign members, one of them being the President of the US Chamber of Commerce in Japan, to look into them. The two leaders agreed on high level market access talks, which will concentrate on electronics and computers, medical equipment and pharmaceuticals, forestry products and telecommunications, which could increase US exports by \$10b in the long term.

On arms control, Nakasone tried to get a clear view of the American stance. He persuaded Reagan to pledge that the US will not negotiate any agreement with Moscow which permits Soviet SS-20 missiles to be moved from Europe to Asia.

Nakasone added to his diplomatic triumphs by visiting the South Pacific nations of Australia, New Zealand, Papua New Guinea and Fiji between Jan 13 and 20. This was a clear sign that Japan is taking on a more active role in the region. In Los Angeles, Nakasone had reaffirmed Japan's commitment to share a "global partnership" with the US and take greater responsibility for coordinating strategic and economic policy in his part of the world. During his trip, he assured his hosts that Japan was committed to peace and prosperity in the region.

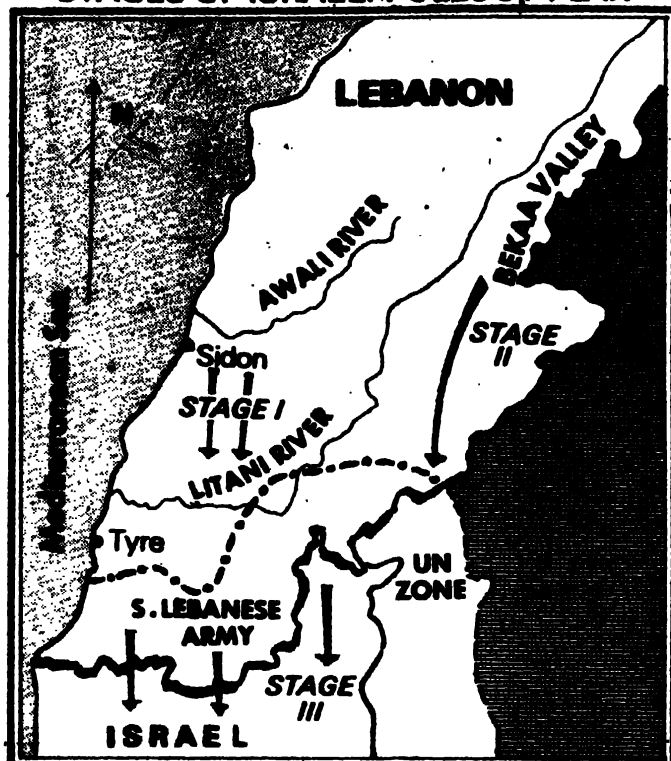
Nakasone was the first Japanese PM to visit Fiji and Papua New Guinea. He offered development aid to both countries and promised to expand cultural and economic exchanges. The rationale behind such commitments is that these mini states are important from the strategic point of view: if the Soviets build bases in the area, the task of the West

Japan is also interested in base in the region. Its trade with its Asian neighbours now rivals the total amount of trade with the US. It depends on the region for quite a few of its basic natural resources. About three-fourths of Australia's total iron ore exports and more than half of Papua New Guinea's copper exports go to Japan.

ISRAEL

WITHDRAWAL PLANS

STAGES OF ISRAELI PULLOUT PLAN



"Israel will be out of Lebanon, in nine months," said a senior official, and so it appeared. The Israeli Cabinet voted 16 to 6 in favour of a unilateral, step-by-step withdrawal of about 22,000 Israeli troops from South Lebanon. The occupation had begun with Operation Peace for Galilee on Jun 2, 1982, when Israeli troops had swept into Lebanon to sweep the area clear of Palestine Liberation Organisation (PLO) guerillas who had used Lebanon as a base for launching military operations into northern Israel. The first phase of the withdrawal will begin within five weeks and will involve the city of Sidon and the area along the Awali river. The troops will redeploy 25 miles inside Lebanon between the Zahrani and Litani rivers. The second phase involves the eastern sector including part of the Bekaa valley, where 40,000 Syrian troops are also present. In the third phase, the Israelis plan to create a zone six to 12 miles inside Lebanon under the control of a 2,150-men Israeli-trained and -financed South Lebanon Army, which consists predominantly of Christian militia.

The withdrawal scheme is opposed by some hardliners in the Likud Party, including Deputy PM and Foreign Minister Yitzhak Shamir. They feel that a pull back without firm security guarantees by the Gemayel Government would lead to the re-population of South Lebanon by PLO guerillas. However, Israel has lost a large number of men in the area in the past few months. The Shi'ite Muslims, who are in a majority in the region, have launched their own attacks against the Israeli Army with the help of Syria. The Shi'ites are also tough in their attitude towards the Sunnis and the Christian minorities, and an Israeli withdrawal may lead to a civil war in the region.

Washington, too, is not too happy about the Israeli decision and are in favour of a quick diplomatic solution. Negotiation, which had been going on between Israel and Lebanon at Naqoura were abruptly broken off after the 14th round, because neither side was ready to compromise. However, after the Israeli Cabinet passed the unilateral withdrawal plan, Lebanon again decided to resume negotiation.

PAKISTAN POLLS

ANTICIPATION AGAIN

President Zia-ul-Haq announced on Jan 12 that Pakistan would hold its elections in February. The National Assembly elections were scheduled for Feb 25 and elections for the Provincial Assemblies for Feb 28. The Provincial Assemblies will elect the Senate in mid-March. According to Zia, Pakistan is moving towards a shurocracy, meaning democracy, Islamic style, the word *shura* being derived from an Arabic word denoting Consultative Assembly. Parties will not be allowed to contest, only individuals. Islamic theorists feel that parties are divisive and in any case a parliamentary Opposition is not required to challenge the government's programme, since it is based on the Quran. However, one should bear in mind that Pakistan is more a Muslim dominated country rather than an Islamic one, and Zia himself is far from being a true Imari, who according to Islamic ideals, should rise to eminence as a result of his goodness and wisdom.

On Jan 19, Pakistan's main Opposition alliance, the 11-party (all banned) Movement for the Restoration of Democracy (MRD), decided to boycott the elections, unless they were held under the suspended 1973 Constitution. Zia lifted electoral ban on office-bearers of most opposition parties, former ministers, etc, but the MRD held firm that he must lift the 1979 ban on political parties, free all political detainees, remove Press curbs, disband military courts and restore the curtailed powers of the judiciary before the elections. Later in the month, the MRD categorically ruled out any negotiations with the military regime regarding their participation in elections and said that it was another *sham* like the referendum of Dec 18.

TURKISH-CYPRIO TALKS

HANDSHAKE OF THE CENTURY

On Jan 17, 1985 Cyprus President Kyprianou and Turkish Cypriot leader Rauf Denkash met in New York at the UN-sponsored meet to resolve the Cyprus problem. The talks however ended in a stalemate, with the two sides blaming each other for the failure.

In three rounds of earlier talks, both parties had come to an agreement in principle over the unification of the Turkish northern Cyprus and the Greek southern Cyprus into a bicameral federal government which would be presided over by a Greek Cypriot President and a Turkish Cypriot Vice-President. Further, the Turkish Cypriots who control 37% of the island agreed to reduce their portion to less than 30%.

However, when the two leaders met recently it became evident that both sides had come to New York with different views. While the Turkish Cypriots claimed they had come to sign a draft agreement worked out with de Cuellar in earlier discussions, the Greek Cypriots said there was no draft agreement and the purpose of their meet has to negotiate the issues discussed earlier before a draft agreement could be formulated. Nevertheless, a positive outcome of the meeting was that the two sides had met each other for the first time since 1979. In fact, Denkash called it the "handshake of the century".

The recent history of Cyprus has been one of turmoil. Cyprus, an island in the Mediterranean was formerly a British colony. After a determined guerilla war, it was granted independence on Aug 16, 1960 and Archbishop Makarios III, who was the head of the Greek Orthodox Church in Cyprus became the first President of the island republic. Serious inter-communal violence between the Turkish and the Greek Cypriots resulted in the installation of a UN peace-keeping force in 1964. In 1974, President Makarios was overthrown in a coup; he fled the country only to return again to resume the presidency. Meanwhile, the Turkish Cypriot leader Rauf Denkash invited the Turkish Army to protect the Turkish community and to prevent Greece from establishing control over the island. The Turkish Army occupied northern Cyprus and in February 1975, the Turkish Cypriots declared the establishment of the "Turkish Federated State of Cyprus" with Denkash as President. The state was recognised only by Turkey; President Makarios died in 1977 and was succeeded by Kyprianou. In 1980, the UN-sponsored peace talks were resumed and in May 1983, the UN General Assembly voted in favour of the removal of Turkish troops from Cyprus. The Turkish Cypriots responded by proclaiming a unilateral declaration of independence and called their state the "Turkish Republic of Northern Cyprus", with Denkash as President; this was again recognised by no other country except Turkey and was duly condemned by the UN Security Council. Following this all attempts for peace between the two communities failed.

The basic problem in the unification talks still remains over the

1974 and number about 17,000 to 20,000. The Turkish Cypriots do not want Turkey to be involved in any part of an agreement. The Turkish Cypriots will not make any concessions about the Turkish military presence as they feel it will hamper their own security interests.

After the present stalemate, UN sources reluctantly admitted that the earlier agreements which had been worked out between the two sides were practically useless.

However, the UN Secretary General hoped to bring the two sides back for another round of discussions by the end of February.

KAMPUCHEA

VIETNAMESE OFFENSIVE

In the most spectacular part so far in the most aggressive dry season offensive of the Vietnamese against the three factions of the anti-Vietnamese Democratic Kampuchea coalition, Vietnam launched a massive attack on Ampil, the headquarters of one of the factions, the Khmer People's National Liberation Organisation (KPNLF), the leader of which is the one time republican PM Son Sann. By Jan 8, Ampil, which is a kind of "model city" and not a mere guerilla hide out, fell. Unlike during earlier attack, the Vietnamese did not put Ampil to the torch, and there were speculations that they may wish to establish a semi-permanent force at Ampil.

The Vietnamese offensive began in November with an attack on Noug Chan, and since then nine camps have been captured. There are about 1,55,000 refugees now in the Thai side of the border. Of the three factions—the KPNLF, Prince Norodom Sihanouk's group and the Khmer Rouge (the Democratic Kampuchea coalition's communist partner, whose leader is Pol Pot)—the KPNLF has suffered the most and of its eight camps only one, Dongrek, which has a civilian population of 17,000, has remained untouched so far. The main object of the present offensive appears to be the elimination of the KPNLF, which is militarily vulnerable. On the other hand, it is politically very active and has grown fast in the past years. It had set up a number of "model cities" as a symbol of their political legitimacy in the country. Sihanouk's group is not as large, and the Khmer Rouge, though militarily formidable, has little political credibility with anyone except their Chinese backers because of their genocidal rule in 1975-78. However, the attack on Ampil has restarted a debate within the KPNLF about the feasibility of fixed positions as defence centres. The swing appears to be in favour of guerilla warfare.

Late in January, the six-nation Association of South-East Asian Nations (ASEAN) and China decided to jointly work to bring Vietnam to the negotiating table in a bid to find a solution to the Kampuchean conflict. China declared that it was willing to negotiate with Vietnam if it withdrew its troops from Kampuchea and also agreed to provide more support to the three anti-Vietnamese resistance groups. Meanwhile, the UN Secretary General, Javier Perez de Cuellar, visited Vietnam and held talks on the political settlement of the Kampuchean conflict. On their part, the Vietnamese called on the US to resolve the conflict and said that Washington could easily contribute to peace in South-East Asia.

BRAZIL

DEMOCRATIC INCLINATIONS

Bom dia, *Democracia* means "Good Morning, Democracy" and indeed, it was a new day for Brazil when Tancredo de Almeida Neves was elected the nation's first civilian President after 21 years of military rule. Democracy is not yet complete in Brazil as its 131m population did not have a direct say in Neves' election. The new leader was chosen by a 686-member electoral college made up of the Chamber of Deputies, the Senate and delegates from each of Brazil's 23 states. However, Neves was the nominee of the Opposition Brazilian Democratic Movement Party and he won 480 votes to the 180 won by Paulo Salin Maluf, the candidate of the military-backed ruling Democratic Social Party. The Brazilian Constitution provides for a six-year presidential term, but Neves has said that he will support direct election for 1988. He has also called for a Constituent Assembly to permit a popular vote.

Brazil is thus slowly inclining towards full democracy. However, the transition is being skilfully controlled by a group of businessmen, political and military leaders. The military will continue to exercise influence over some areas of government, including the armaments industry. They have also extracted assurances that Neves would not promote any embarrassing investigations into past human-rights abuses and corruption, like his neighbour Raul Alfonsin in Argentina.

Neves has won widespread acceptance. According to a poll conduc-

This is because he is a conciliator and has managed to steer a careful course between the military and its civilian opponents in politics. He began his political career in 1934 as a city councilman and in 1961 became the PM of Brazil. After the 1964 military coup he served as a federal deputy, and tried to find a way to restore democracy via a Congress severely limited in its power. He became a Senator from his home state Minas Gerais in 1979 and its Governor in 1982. Now, as the President, he will not find the going too easy. Brazil has a huge foreign debt of about \$100b. Although it had a trade surplus of \$13b last year, \$10b of that went as the annual interest due on the debt. The inflation is at 230%. During his campaign for the presidency, Neves made few promises beyond pledging to restore direct presidential elections and curbing the inflation rate. He visited the US in late January when his diplomatic skills were on trial. The US has fixed import limits on Brazilian steel, textiles and shoes and the Brazilian plea was for easier access to American markets.

NORTH-SOUTH YEMEN

WOOLING THE WEST

There may be changes in the entrance to the Red Sea, which is of international significance, because it is the vital route of Arab oil to the West. North Yemen (Yemen Arab Republic) has been playing all sides for some time. It has 15 American F-5 jets and about 60 Soviet MiGs in its air force. In 1984 President Ali Abdullah Saleh signed a 20-year treaty of friendship and co-operation with the Soviet Union, but still retains its non-aligned status. In July 1984, the Hunt Oil Co. of Texas discovered oil near North Yemen's ill-defined border with South Yemen and Saudi Arabia and there are signs that it would tilt more towards the West, because it has sought to obtain American oil drilling technology. On the Arab front, it recently hosted the Islamic Conference and welcomed Egypt to the fold, despite protests by Iran and Syria. Relations with South Yemen, too, have been good and there is a strong sentiment in favour of the unification of the two countries, despite centuries of separation.

South Yemen (People's Democratic Republic of Yemen) has also been showing signs that it may start looking to the West for help. So far, since it won independence from Great Britain in 1967, it has been staunchly Marxist. But North Yemen's oil find has whetted its own appetite for oil and it has been wooing the West to let its prospectors find oil, which the Soviets have been unable to find so far. It has resumed border negotiations with Oman and strengthened its ties with Saudi Arabia, Great Britain and other West European allies. It has also been encouraging Western companies. A French company has built a hotel and South Yemen now wants Air France to be the first European airline to fly through the country. It has also bought two American-made Boeing 737 commercial jetliners and two American technicians arrived in the country with the planes. While Washington declared that it would welcome US investment in South Yemen, since this would help to balance the Soviets, who already have a naval base at Aden and the South Yemen island of Socotra in the Arabian Sea, it added that it could not protect American oil-men and other investors until diplomatic ties, which were broken in 1967, were restored with the country.

NEW CALEDONIA

FORMULATING PEACE

After a fresh spurt of violence, the French President Francois Mitterrand decided to visit the French Pacific colony of New Caledonia on Jan 17. The idea was to sell a peace formula to the warring Kanaks, the black Malanesians who narrowly form the largest single ethnic group on the island, and the Colons, the French settlers. While the former want independence from France, the Colons wish to remain with France. Mitterrand's formula spells autonomy and not total independence. The settlers could keep their French citizenship under the plan, and the French police would protect them.

Whether such a plan would be acceptable to either side is debatable. The island has been rocked by violence for the past few months and already have over 6,000 French policemen in New Caledonia, which has a population of only 1,45,000, the ratio being one policeman to every 24 islanders. The French Agricultural Minister Edgar Pisani, had been sent as Special High Commissioner in December to break the deadlock which had developed after the Kanaks had boycotted the territorial election held on Nov 18. He had presented his ideas on Jan 7 in which he had suggested that a referendum should be held in July to decide whether New Caledonia should have an "independence association". He

...and cooperation for its national security, justice, currency, transportation and communications. He also proposed that France should cooperate with New Caledonia on its economic development, agriculture, tourism and exploitation of maritime resources.

While the leader of the Kanak Socialist National Liberation Front (FLNKS), Jean Marie Tjibaou, partly welcomed the proposals, the French settlers denounced them as a "monstrous idiocy".

The situation was further aggravated when a group of Kanaks killed a white teenager, Yves Tual, in a white-owned farm on Jan 11. The enraged French rioted in the capital city of Noumea and the next day two Kanak extremist leaders, Eloi Machoro and his lieutenant Marcel Nonnero, were killed by a group of gendarmes. While the official account says that they had refused calls to put down their weapons, the FLNKS says that they had come out to talk to the gendarmes from a farm house and had been assassinated. Pisani had to stop the violence by declaring a state of emergency and imposing curfew.

Mitterrand's visit temporarily soothed the enraged feelings and he has put the prestige of his office behind his formula. The danger, however, is that extremists on both sides may not heed his plea and antagonisms would then become more fierce. Mitterrand, however, feels that "the dialogue continues".

SINGAPORE

PAP'S POOR SHOW -

In Singapore's recent elections Lee Kuan Yew's People's Action Party (PAP) won all but two of the 79 seats in Parliament. However, Lee was not too happy because while in 1980 the PAP had won 76% of the popular vote, it won only 63% this time and a number of PAP members came close to losing. The Opposition Working Party leader, J.B. Jayeretnam, who had gained his seat in a 1981 by-election, retained it and another opposition leader, Singapore Democratic Party's Chaim See Tong, defeated a strong PAP candidate. Furthermore, a new constitutional amendment allotting three permanent seats to the Opposition will require the government to add a "best loser" MP with limited voting powers bringing the total membership of the Parliament to 80.

Aware of the need to know about the cause of its relatively poor showing after being at the helm for 25 years, the government is allowing a liberal run to anti-PAP views in the letters to the editor column of the local Press. Some of the letters complained about the brushing aside of bread-and-butter issues by the PAP during the campaign. Others accused it of being too authoritarian and unwilling to listen to popular grievances. Yet others wanted a genuine Opposition. However, one major reason was that Lee announced the election one year before it was due. This gave the Opposition ample time to prepare.

In a post-election news conference, PM Lee indicated that the "one man, one vote" system may lead to national disintegration and many concluded that he was aiming at a constitutional amendment. However, the First Deputy PM Goh Chok Tong said later in the month that the present system worked well and ultimately the people should decide through a referendum whether any change was necessary or not. Goh appears to be the next in the line of succession to Lee.

Singapore also created headlines when it announced recently that it would quit UNESCO. It is the first Third World country to make such an announcement. The US and Britain have already opted out of the UN body. While Singapore said that its limited resources had prompted it to leave, others felt that it had other motives. The timing of the move led to some speculation—its statement, so soon after the US pull out, led many analysts to conclude that Lee was out to please Washington.

ECONOMY

STERLING SLIDE

From its peak in 1981 to end 1983, sterling fell by 39% against the dollar and by 18.7% against major currencies in the world. In mid-January the pound dropped to \$1.11 and it seemed that the previously unthinkable level of parity with the dollar was fast approaching. The government, however, intervened and forced up interest rates and the pound steadied somewhat by January end at \$1.121. However, the confidence in PM Margaret Thatcher's Government's management of the economy was badly shaken. Britain's Chancellor of the Exchequer Nigel Lawson, had forecast a \$1.7b in tax cuts in the next budget, but there were indications that he would not be able to keep his word. His aides said that the budget deficit would probably run more than \$2b higher than expected in the present fiscal year. There was fear of increased inflation and if this is added to the unemployment rate, which, at nearly 13% is among the highest in West Europe, the state of the economy certainly does not

and in 1984, there was a total deficit of over \$3b, and excluding oil, the deficit was around \$9b. Britain's share of the world exports dropped from 8.5% in '81 to only 7.9% in '83 and is still heading down.

One of the reasons for the slide of the pound has been the strong dollar, which by the end of December had hit an all-time high against the French franc and a 12-year record against the Deutsche mark. Lawson recently visited Washington and met with outgoing US Secretary of Treasury, Donald Regan and the finance ministers of West Germany, France and Japan. This was the so-called "Group of Five" which had pledged to undertake coordinated intervention in the currency markets "as necessary," at the Williamsburg Summit of 1983. At the present meeting, however, no specific action was suggested to bring down the dollar.

Another major cause for the sterling's decline has been the weakness in oil prices. Britain's North Sea oil accounts for only 6% of the country's total output, but generates one-tenth of the Chancellor's tax revenues. There has been a downward trend in oil prices. Recently Norway's Statoil declared that it would fix its price not by reference to the British National Oil Corporation's price, but by lower spot market prices. This would mean that Britain too, would have to cut its oil prices further.

The one bright sign for the government was the state of the long miners' strike. In the last week of January another 2,870 miners went back to work. Altogether, 40% of the 1,87,800 members of the National Union of Mineworkers (NUM) were back on their jobs. NUM's also showing definite signs of splitting. The Nottinghamshire and South Derbyshire branches of the union have decided to subordinate the union's national rules to their own local ones. The union boss, Arthur Scargill, however, remains a die hard.

POLISH PRIEST'S MURDER

OFFICIAL COVER UP ?

Hundred miles northwest of Warsaw, in the city of Torun, the trial of the four Secret Policemen indicted for the murder of Father Jerzy Popieluszko, a Roman Catholic priest who was an outspoken supporter of the banned Solidarity trade union, and whose bound and beaten body was recovered from a reservoir near Moscow last October, began. According to the indictment Secret Police Capt Grzegorz Piotrowski, the alleged ring leader, recruited two lieutenants from the security forces, Leszek Pekala and Waldemar Chmielewski, to kill the priest. The prosecution also named Secret Police Col Adam Pietruszka as the man who gave the order. All of these have been reduced to the rank of privates now. Many had expected the ex-captain to confirm the prosecution's original claim that the killing was carried out with the support and knowledge of high ranking Internal Affairs Ministry, which oversees the Secret Police. But none of the indicted persons allowed the blame to go any higher, although earlier the ex-captain had said that the orders to abduct Popieluszko had come from the top. Piotrowski confessed that he had murdered the priest and added that it was Pietruszka who had decided to take action against Popieluszko in September, and had told him that the decision came from the highest level.

Pietruszka, however, claimed not guilty to the accusations of the ex-captain and said that the latter had misunderstood instructions and taken matters into his own hand. What is more interesting is that he took the opportunity on the stand to vent his feelings against the Roman Catholic Church. He accused the priests of fomenting hatred towards Marxism and of even being licentious. He spoke with venom of the fact that import duties of about \$2,31,000 were waived for priests, mostly for luxury goods and cars. He added that they disregarded the law and

ONE-DAY SOVIET STYLE

In the USSR, the number of gainfully employed has closely approached 130m. They daily produce more than 3,300m roubles worth of various goods and more than 6,000 new flats are turned over for occupancy by Soviet builders. Every day nearly 15,000 babies are born. More than 12.5m barrels of oil and 1,500m cubic metres of gas are produced every day. Over 2m pairs of leather shoes, more than 24,000 TV sets and 16,000 refrigerators and freezers are dispatched by the industrial enterprises to Soviet shops and other countries daily. Every day nearly 11.5m people travel by rail, 3,00,000 by air and 1,40,000 by sea-going ships. More than 15m people go to cinemas daily and nearly 90m go in for physical culture and sports, having at their disposal 74,000 gyms, 95,000 gridirons, 3,50,000 tennis, volleyball and basketball courts.

Whatever the outcome of the trial, the government is embarrassed. There is suspicion of a possible official cover up. To squelch such suspicions, the authorities have allowed two priests, representing the episcopate of the Roman Catholic Church to "observe" the case.

ETHIOPIA

THE FAMINE AND AFTER

The hunger in Ethiopia continues, and with it a mass exodus into neighbouring Sudan has begun. This creates a new threat because starvation also haunts Sudan's 21m population. About 6,00,000 Ethiopians have already crossed into Sudan and about an estimated 3,50,000 more are expected to arrive in the next two months. The refugees are being helped by two anti-government guerilla groups, the Eritrean People's Liberation Front (EPLF) and the Tigre People's Liberation Front (TPLF). The Ethiopian Government retaliated by strafing refugee lines and bombing villages.

Besides famine, the government action shows another aspect of Ethiopia's disaster: civil war. Many of the refugees are not only fleeing starvation but the policies of the communist government of Col Mengistu Haile Mariam. Two insurgencies have long been festering in Ethiopia's northern provinces. The Eritrean guerillas have been battling for the control of their 45,400 sq mile homeland, which was absorbed by Ethiopia in 1962 for 23 years. In the mid-1970s, the insurgents were joined by the Tigrean guerillas who demand greater autonomy for their 25,000 sq mile province. The Eritreans control about 85% of the Eritrean countryside while the Tigrean autonomists control 90% of Tigre

villages and surrounding areas. The guerillas feel that this has aggravated famine conditions. They also claim that Western food aid is being used as a tool by the government in its "pacification" programme. They maintain that little of the aid reaches the badly affected provinces of Eritrea and Tigre. Further, only those who show identity cards of state-controlled peasant organisations and neighbourhood associations are given food in the food centres.

The Ethiopian Government has also been following a resettlement programme involving the sending of 2.5m northerners to government — controlled areas in the southwest. So far about 70,000 people, mostly from Tigre and Welo have been moved. The guerillas are very critical of this scheme for the northerners find the southwest uncongenial and families are broken in the process.

Meanwhile, the Israelis were recently involved in airlifting thousands of starving Ethiopian Jews—Falashas—to Israel. Codenamed Operation Moses, the airlift resulted in the transfer of about 7,000 Falashas in the past few months from Sudanese refugee camps. The operation came to an abrupt halt when it became public knowledge. Airline officials acknowledged later that the Sudanese Government had ordered the halt. Sudan probably did not want to alienate other Arab states, none (except Egypt) of which have diplomatic relations with Israel. The operation has led to a lot of controversy and many Arab states have condemned Sudan. However, the rescued Falashas are none too happy to be in the promised land: their families are divided and about 7,000 Falashas are still in Sudan, while another 10,000 wait in Ethiopia.

SANJUKTA BANERJEE & ANITA BISWAS

CURRENT EVENTS : NATIONAL

(Continued from page 19)

tained at last year's level while rabi crops may perhaps show a marginal rise. Therefore, overall foodgrains output is expected to reach the targeted level of 153.6m tonnes in 1984-85. Cash crops are however not expected to do as well as foodgrains. The target for oilseeds for 1984-85 has been fixed at 13m tonnes compared to 12.8m tonnes in 1983-84. Of the other major cash crops sugarcane and cotton will fare marginally better than last year while jute crop production, owing to prolonged floods in West Bengal and Assam, will be badly affected.

The external sector has also shown marked improvement in 1984-85. Total exports expanded by 12.7% during April-August, 1984, against 8.3% in 1983. Non-oil exports expanded by 20.4% over the corresponding period last year. The foreign currency assets of RBI have increased by Rs 850 crores so far and stood at Rs 6,348 crores at the end of October 1984.

Monetary expansion during the fiscal year 1984-85 (Mar 30-Nov 15, 1984) has been Rs 8,490 crores compared to Rs 8,189 crores during the same period in the last fiscal year. The net credit of the government in the current financial year is Rs 5,956 crores compared to Rs 4,700 crores last year. Non-food credit has shown an increase of 8% compared to 5% in the preceding year. The country can therefore look forward to a relatively inexpensive year on the basis of this RBI report.

SEVENTH PLAN PROSPECTS

SETTING THE LIMITS

The Planning Commission, chaired by the PM has decided to maintain the public sector outlay of Rs 1,80,000 crores for the Seventh Plan (1985-90) envisaged in the approach paper despite the serious resources gap. In its inaugural meeting on Feb 8, the commission categorically ruled out any cut in the Plan size even though the resource position is undoubtedly very tight. While reviewing the progress of the draft Seventh Plan, which has already been delayed by at least six months as it had earlier been scheduled for December-end, it reiterated the basic objectives of Indian planning as removal of poverty, modernisation and attainment of self-reliance and stressed on specific policies and programmes in the light of contemporary realities. The PM also laid emphasis on long-range vision and perspective in planning.

The suggested solution for combating the tight resource position, according to the PM, is more stringent financial discipline, cutting down wasteful expenditure, efficient collection of taxes coupled with a tighter system of priorities by concentrating on a few basic and essential things and curbing the tendency to spread resources too thinly.

The Governor of the Planning Commission Dr Manmohan Singh was hopeful about finding the requisite resources of Rs 1,80,000 crores but

did not rule out deficit planning "within manageable limits". Commercial borrowing, depending on the export situation, was also recommended for ensuring that the country was not burdened with heavy debt. Finally, the Planning Commission underlined the major task of the Seventh Plan—rendering assistance in the harnessing of all available resources to accelerate the tempo of social and economic progress. The draft Plan which will be finalised by the commission by July-end this year will then be put up for approval by the Cabinet and the National Development Council before it is implemented.

CSO ESTIMATES

IMPRESSIVE PERFORMANCE

The Central Statistical Organisation (CSO) presented its estimate of India's economic performance during 1983-84. An impressive increase in national income by 7.6%, in real terms, as against a meagre 1.6% during the preceding year, was the highlight of the past year. At constant prices (1930-71 base) the estimated national income in 1983-84 was Rs 54,276 crores compared to Rs 50,437 crores in 1982-83, while at current prices it works out to Rs 1,59,598 crores and Rs 1,32,470 crores respectively.

India did reasonably well in most sectors. Production of foodgrains increased from 129.5m tonnes in 1982-83 to 151.5m tonnes and oilseeds from 9.9m tonnes to 12.8m tonnes. Forestry picked up from a negative growth of 7.2% during 1982-83 to 4.9%, mining showed 10.4% growth, the manufacturing sector 5% and electricity, gas and water supply registered further growth of 7.4%. However, production of sugarcane, cotton and tobacco declined by 6.6%, 12.6% and 14.8% respectively.

The per capita income in real terms increased by 5.2% and is estimated at Rs 749 for 1983-84 as against Rs 711 in the preceding year. At current prices this works out to be Rs 2,201 and Rs 1,868 respectively. In 1983-84 the private final consumption expenditure constituted 68.3% of the gross domestic product at market prices while the per capita income increased by 5.9%.

The net domestic saving during the year was Rs 31,031 crores as compared to Rs 26,080 crores in 1982-83 forming 17% of the net domestic product at market prices, primarily due to increase in savings of the household sector, household physical assets and financial savings. Savings both in the private and public corporate sectors fell from Rs 1,303 crores to Rs 1,255 crores for the former and from Rs 4,929 crores to Rs 3,900 crores for the latter. The rate of capital formation had an edge over the rate of savings during the year. The inflow of capital from abroad remained at almost the same level as 1982-83. The gross domestic capital formation at current prices increased from Rs 39,859 crores in 1982-83 to Rs 46,738 crores in 1983-84.

JYOTSNA SHARMA

Down The Ages

Through the corridors of time. And what have we? The Golden Ages when our ancestors achieved glory in every branch of human endeavour. Their majesties who reigned supreme. And those who would be king. The 'men' of God and the 'message' they spread. The reformers and the freedom fighters. The changing fabric of Indian society, economy, politics and the struggle for independence. Such a rich historical past has ensured it a major share in all the major exams. To ensure the exam-takers are not caught on the wrong foot, our special on History.

BY SANJUKTA BANERJEE & INDUMATHI

THE GOLDEN AGES

The Mauryas

The important kings were Chandragupta Maurya (322-298 B.C.) and Ashoka (273-232 B.C.)

Main sources of history: Megasthenes' *Indica* and Kautilya's *Arthashastra*. Both give a vivid account of the extent of social and political development of the Mauryas.

Extent of Ashoka's empire: From the Brahmaputra in the east to the Hindukush in the north-west and the Arabian Sea in the west and from the Himalayas in the north to River Pennar in the south. Some portions of Nepal and Kashmir and the provinces of Kabul, Herat and Qandahar were also part of his empire.

Ashoka's dharma: It included certain principles like respect of elders, ahimsa, religious tolerance, truthfulness, charity and leading a pure life, all of which can be practised in any religion. The adoption of this sort of universal religion brought about a radical change in his imperial policy: a change from the policy of *dig vijay* (conquest of the world) to one of *dharma vijay* (conquest through religion). He appointed dharma mahamatras to improve the general life of the people.

Architecture: The buildings were mostly of wood and so have not survived. But Greek writers have left accounts of the grandeur of the royal palaces. Stupas were built throughout the empire to enshrine the relics of Buddha.

According to Buddhist tradition, Ashoka built 84,000 stupas; of these the most famous which have survived are at Sanchi and Barhut. According to Kalhana Ashoka laid the foundation of Srinagar. He also probably built the town of Devapattan in Nepal.

Sculpture: Reached a high-water mark. Ashoka's pillars are the best examples of this art. They are hewn out of single rocks, and surmounted by exquisite lion, bull, elephant or horse capitals. The art of polishing, as can be seen from the pillar now installed at Feroze Shah Kotla, Delhi, reached perfection. It is also evident that the art of engineering was developed since cutting these pillars out of hard stones and taking them hundreds of miles away needed engineering skills.

Education: Ashoka engraved his edicts on rocks, pillars and cave walls and placed them on highways for his subjects to read. This indicates a high literacy rate. The *gurukulas* of the Buddhist monasteries which the Mauryan rulers built played an important role in spreading education. The University of Taxila was important for Buddhist learning, while that of Benaras was an important seat of Sanskrit and Brahmin learning.

Literature: Kautilya's *Arthashastra*, Bhadrabahu's *Kalpa Sutra* and many of the *Griha-Sutras* were composed in Sanskrit. The Buddhist text *Katha Vattu* and the Jain texts,

Bhagwati-Sutra, *Acheranga-Sutra* and *Das Vekulik* were also composed in this period.

The Kushans

Important kings: Kadaphises I, Kadaphises II, Kanishka (78-102 A.D.), Huvishka.

Extent of Kanishka's empire: From Bokhara in the north to Ujjain in the south and from Benaras in the east to Afghanistan in the west.

Kanishka's religion: Buddhism. Active propaganda was practised especially through statues of Buddha. A special council of Buddhist scholars and monks was called at Kundalavana in Kashmir and a commentary on the sacred texts, known as *Mahavibhassa*, was compiled. The Buddhist faith was reformed so that it could have mass appeal and the reformed faith, Mahayana Buddhism, began to spread outside India as well. The old faith, Hinayana Buddhism, was given up.

Art and literature: Asvaghosa's *Buddha-Charita* has been compared with Valmiki's *Ramayana*; Vasumitra contributed to the compilation of *Mahavibhassa*. The scientist-philosopher Nagarjuna and the Ayurvedic physician Charaka also lived in Kanishka's court. The Gandhara school of art made great progress under the Kushans. It was more refined and polished than the earlier school.

The Guptas

Important kings: Chandragupta-I (320-335 A.D.), Samudragupta (335-380 A.D.), Chan-

A DATE WITH HISTORY



Statue of a bearded man, Mohenjodaro.

	B.C.
Indus Valley Civilisation	: 3000-2500
Composition of Vedas	: 2500-2000
Birth of Buddha	: 563
Birth of Mahavira	: 540
Alexander's invasion	: 326-323
Sisunga dynasty	: 600-371
Nandas	: 371-216
Mauryas	: 320-184
Chandragupta	: 322-298
Ashoka	: 273-232
Sungas	: 185-73

	A.D.
Kushans	: 20-182
Kanishka	: 78-102
Guptas	: 320-545
Chandragupta I	: 320-335
Samudragupta	: 335-380
Chandragupta II	
Vikramaditya	: 380-413
Harsha Vardhana	: 606-647
Arab invasion	: 712
Mahmud Ghazni	: 998-1030
Muhammad Ghor	: 1186-1206
Slave dynasty	: 1206-1290
Qutb-ud-din Aibak	: 1206-1210
Iltutmish	: 1210-1236
Raziya Sultan	: 1236-1239
Ghiyasuddin Balban	: 1266-1287
Khalji Dynasty	: 1290-1320
Alauddin Khalji	: 1296-1314
Tughlaq dynasty	: 1320-1414
Muhammad-Bin-Tughlaq	: 1325-1351
Firuz Tughlaq	: 1351-1388
Timur's invasion	: 1398
Lodi dynasty	: 1450-1526
Sikander Lodi	: 1489-1517
Ibrahim Lodi	: 1517-1526
Mughals (I Phase)	: 1526-1540
Babar	: 1526-1530
Humayun	: 1530-1540
Suris	: 1540-1555
Sher Shah Suri	: 1540-1545
Mughals (II Phase)	: 1556-1707
Akbar	: 1556-1605
Jahangir	: 1605-1627

Shah Jahan	: 1627-1659
Aurangzeb	: 1659-1707
Marathas	: 1649-1748
Shivaji	: 1627-1680
Sikhs	: 1701-1818
Ranjit Singh	: 1785-1849
Cholas	: 985-1044
Bahmanis	: 1347-1518
Vijaynagar	: 1336-1565
Krishna Deva Raya	: 1509-1530
Robert Clive	: 1751-1767
Governor-Generals	
Warren Hastings	: 1774-1785
Lord Cornwallis	: 1786-1793
Lord Wellesley	: 1798-1806
Lord Minto	: 1807-1813
Marques of Hastings	: 1813-1823
Lord William Bentinck	: 1828-1835
Lord Hardinge	: 1844-1848
Lord Dalhousie	: 1848-1856
Lord Canning	: 1856-1862

Viceroy	
Lord Canning	: 1858-1862
Lord Lytton	: 1876-1880
Lord Ripon	: 1880-1884
Lord Curzon	: 1899-1905
Lord Minto	: 1905-1910
Lord Hardinge	: 1910-1915
Lord Chelmsford	: 1916-1921
Lord Irwin	: 1926-1931
Lord Willingdon	: 1931-1936
Lord Linlithgow	: 1936-1944
Lord Wavell	: 1944-1947
Lord Louis Mountbatten	: March-August 1947



King Krishna Deva Raya.



dragupta Vikramaditya (380-413 A.D.), Kumaragupta (414-455 A.D.), Skandagupta (456-487 A.D.).

Sources of information: Fahein's account; the Allahabad pillar inscription written by Samudragupta's court poet, Harishena; the iron pillar of Chandra at Mehrauli (Qutb Minar), important for Chandragupta Vikramaditya; other inscriptions at Basarh, Udaygiri and Sanchi; the Puranas, especially the Vayu Purana; coins.

Extent of Samudragupta's empire: From the Brahmaputra in the east to the Jumna and the Chambal in the west; from the Himalayas in the north to the Narmada in the south. The Deccan and other neighbouring states accepted his suzerainty. He is called the 'Indian Napoleon'. Chandragupta-II (Vikramaditya) defeated the Saka satraps of Malwa, Gujarat and Saurashtra and annexed their territories.

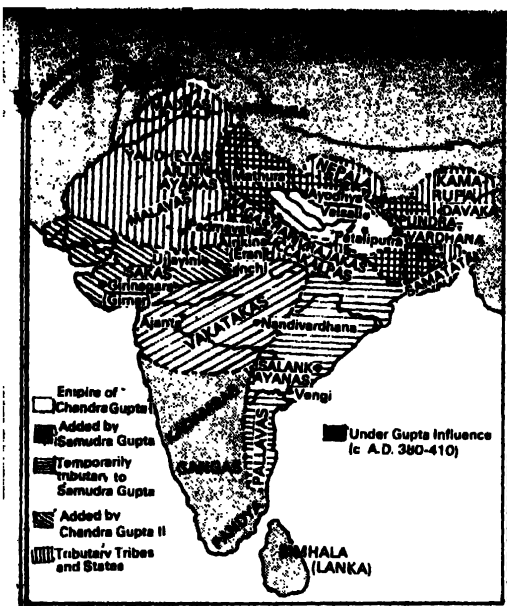
The period is known as a golden age because after the Mauryas there was unity in the country for the first time, the character of the government was enlightened, and there was a revival of Hinduism. At the same time there was broad religious toleration and peace and prosperity as both inland and foreign trade flourished.

Literature: Kalidasa—*Malvikagnimitra*, *Vikramorvasi*, *Shakuntala*, *Meghdoot*, *Ritu Samhara*, *Raghuvansa* and *Kumar Sambhava*. Visakhadatta—*Mudrarakeshsha*, *Devi Chandragupta*; Amarasimha—*Amarkosa*; Bharavi—*Kirtanarjuniya*, Sudraka—*Mrichhakatikam*. The panchatantra was also written in this age and the Puranas, the Mahabharata and the Manusmriti were recast.

Science: Progress in Astronomy, Astrology and Mathematics. Scientists and mathematicians: Aryabhata, Varahamihira, Brahmagupta, Vridh-Vagbhata, Dhanvantri, etc.

Fine arts: The Gupta sculpture is characterised by symmetry, natural proportions, spiritual calmness and transparency of apparel. The Ajanta caves belonged to this period. In architecture, the *sikhra* in temple architecture came into vogue.

Education: There were universities at



Nalanda, Taxila, Samath and Ajanta in addition to a large number of *pathshalas*.

The Gupta period has been characterised as the 'Elizabethan period of Indian history' because the Gupta Empire achieved glory in every branch of human endeavour.

Age of Harsha

Harsha Vardhana (606-47 A.D.) ruled over the kingdom of Thaneshvar. His reign marks the culmination of ancient Indian culture.

Extent of empire: From the Brahmaputra in the east to East Punjab in the west; from the Himalayas in the north to River Narbada in the south

Sources of information: Hieun Tsang's account and Bana's *Harshacharita*.

Religion: Initially Hinduism then Buddhism. He called an assembly of Buddhist monks every five years at Prayag. He also held a grand assembly at Kanauj in honour of Hieun Tsang.

Literature: Harsha—*Ratnavali*, *Priyadarshika*, *Nagananda*; Banabhatta—*Harsha Charita*, *Kadambari*. Other scholars: Matanga, Divakara, Jayasena, Bharati Hari. Harsha was a great patron of learning as well as a great conqueror.

Education: Universities—Taxila, Ujjain, Gaya, Nalanda, Vikramshila. Elementary education was given in the temples and monasteries.

The Mughals

Age of Akbar (1556-1605): **Extent of empire:** From the Himalayas to Khandesh in the south, from the Hindukush in the west to River Brahmaputra in the east.

Religion: Akbar believed in following a policy of *Sulh-i-kul* (peace towards all), which was the first attempt at national integration. He constructed the Ibadat Khana (house of worship) where scholars of various religious faiths debated so that he could find the points of difference and similarity between religions. To end religious dispute among the Muslim clergy he promulgated the *Mahzar-name* (a decree) by which he took on himself the task of Imam-i-Adil; he could choose what he thought

ward by the clergy in the case of a dispute or issue a new order based on the Quran. Finally, he began a new faith or order, the Din-i-Ilahi or Tawhid-i-Ilahi (Divine Monotheism) which was eclectic, and which a select few joined.

Administration: Akbar was responsible for bringing order to the civil and military administration through the organisation of the mansabdari system by which civil and military officials were classified by the ranks of *Zet* and *Sewar*. During his time, Todar Mal also organised the land revenue administration on a more scientific basis.

Education: He built colleges at Fatehpur Sikri, Agra, etc. To improve Muslim education, he effected certain changes in its curriculum. In his later years, he promoted the education of Hindus in madrasas.

Literature: He set up translation departments to translate other works into Persian. The Mahabharata was translated with the title of Razm Namah; the Ramayana was translated by Badauni in 1589. Haji Ibrahim

Sirhindi translated the Atharva Veda, slated *Lilavati*; Mukammal Khari Gujrati the *Tajak* (a work on astronomy). Historians: Abul Fazl—*Ain-i-Akbari* and *Akbar Nama* (of which the *Ain* is a part); Mulla Deud—*Tarikh-i-Ain*; Badauni—*Muntakhab-ut-Tawarikh*; Nizamuddin Ahmad—*Tabaqat-i-Akbari*; Abdul Baqi—*Ma'asir-i-Rahimi*; Faizi Sirhindi—*Akbarnamah*. Poets: Faizi, Ghizeli, Muhammad Husain Naziri and Sayyid Jamaluddin Urfi. Hindustani court writers: Malik Muhammad Jayasi—*Padmavat*; Birbal (entitled Kavi Priya), Raja Man Singh, Narahgri and Harinath. Other Hindustani writers; Surdas—*Sursagar*; Nand Das—*Ras-panchedhyayi*; Vithal Nath—*Chaurasi Vaishnava Ki Varta*; Ras Khan—*Premevertika*; Tulsi Das—*Ramcharitmanas*.

Architecture: Characteristic feature: Combination of Hindu and Muslim architectural ideas; lavish use of red sandstone, with *naakh* for decoration. Important buildings: The Fatehpur Sikri complex and Agra Fort complex.

Shah Jahan's reign is considered the Golden Age of Mughal architecture Characteristics



lavish use of pietra dura inlay work; perfection of Persian double dome; beautiful garden complexes. Important buildings: Taj Mahal, Moti Masjid and Jami Masjid at Agra; Diwan-i-

Amir, Diwan-i-Khas at Delhi; Jahangir's mausoleum at Shahdara (Lahore) and Jami Masjid, Delhi. Another famous work of art: Peacock throne, removed by Nadir Shah to Persia in 1739, no longer exists.

Babur (1526-1530): He was the founder of the Mughal Empire in India. By defeating Ibrahim Lodi at the historic Battle of Panipat in 1526, he became the master of Hindustan. Babur possessed an indomitable spirit and remarkable military powers and laid the first stone of the splendid dynasty which his son Humayun inherited. His victories led to the rapid popularisation of gun powder and artillery in India.

Bairam Khan: Acted as a regent to Akbar after his succession; he possessed superior culture, literary gifts and shrewdness combined with high diplomatic skill and administrative experience.

Balaji Vishwanath: Appointed Peshwa to the Maratha ruler Shahu in 1713; by virtue of his superior talents and abilities he made 'the Peshwa' the real head of the Maratha Empire. His son **Baji Rao I** was an able soldier and a wise statesman, he formulated a policy of Maratha imperialism, launched a policy of expansion, struck at the roots of Mughal power and preached the ideal of Hindu *pad-padshahi* or a Hindu Empire.



Bal Gangadhar Tilak (1856-1920): Known as Lokmanya, he was the father of Indian unrest and was one of the founders of the Deccan Education Society. He began to preach patriotic feelings through his papers *Kesari* and *Mahratta*. He was considered a radical in political affairs and a conservative in social reforms. He wanted to build a militant mass movement and his concepts of *Swadeshi* and national education gave a new turn to the National Movement in 1905. Tilak revived the Shivaji and Ganesh festivals to create an awakening among the masses; he uttered the famous words "Swaraj is my birthright and I will have it" as early as 1897.

Bankim Chandra Chatterjee (1838-1894): An eminent Bengali novelist and journalist, he wrote the national song *Bande Matram*; enunciated the concept of Indian Nationalism, was a social philosopher and the builder of modern Indian literature.

Bhimrao Ramji, Ambedkar (1891-1956): A Maharashtra scheduled caste leader and

HISTORY MAKERS

Abul Fazl: The most famous of the nine gems of Akbar's court, he was a great scholar and wrote *Ain-i-Akbari* and *Akbarnama*—the two immortal works which throw light on Akbar's conquests and his religious, administrative, social, economic, and revenue reforms.



Akbar (1556-1605): Only 13 when he came to the throne he defeated Hemu, the Afghan chief in the II Battle of Panipat thus bringing to a close the Mughal-Afghan contest for supremacy. He followed a policy of conquest, achieved the political unification of the whole of northern and central India, and followed a policy of conciliation with the Rajputs and the Hindus. In 1575, he constructed the Ibadat Khana. The discussions and discoveries here led to the promulgation of Din-i-Ilahi or Divine faith. He emphasised the concept of Sulh-i-kul or universal peace.

The mansabdari system was the main essence of his government (see page 27). Land revenue was modified, demand of the state being fixed at one-third of the actual produce. His reign saw a remarkable development in architecture. Some of the edifices erected by him were Humayun's Tomb at Delhi, the city of Fatehpur Sikri and forts at Lahore, Agra and Allahabad.

Alauddin Khalji (1296-1314): His reign witnessed the rapid expansion of Muslim dominion in different parts of India. He challenged the authority of the *ulama* (Muslim clergy), acted according to his own convictions and laid down rules and regulations designed to help in the establishment of a strong government at the Centre. He assailed the institution of private property, issued a series of economic reforms regulating the prices of all articles. Alauddin Khalji was fond of architecture and in the 13th century undertook the construction of Alai Darwaza, one of the intricately designed gates of the Qutb Minar.

Alexander (326-323 B.C.): He invaded India in the 4th century B.C. In 326 B.C. he crossed the Khyber Pass and came to India and at River Jhelum defeated King Porus. Thereafter he decided to retreat and on his way back, died in Babylon in 323 B.C. His conquest of

India proved shortlived. However, the invasion opened different areas of communication between India and the West. India learnt much about Astronomy and coinage from the Greeks, while the latter were influenced by Indian religion and philosophy. The Gandhara school of sculpture which developed later in India was affected by the Greek-Hellenic art of sculpture.

A.O. Hume (1829-1912): A Scottish ICS officer, who sympathised with Indian peasants and in 1883 organised the Indian National Union, later called the Indian National Congress.

Amir Khusrau: The most notable Persian writer of the Mughal period, he wrote a large number of political works including historical romances. He created a new style of Persian literature which came to be known as *Sabaq-i-Hind* or Style of India.

Annie Besant: The real pioneer and leader of the Theosophical Society in India, her aim was to revive ancient ideals and institutions in the country. To achieve this she started the Central Hindu School in Benares.

Aryabhata (476-500 A.D.): A celebrated Indian astronomer and mathematician of Chandragupta Vikramaditya's reign, he formulated the rule for calculating the area of a triangle, which eventually, led to the origin of Trigonometry. He calculated the position of the planets and discovered the cause of the lunar and solar eclipses. He was the author of the book *Aryabhatiya*.

Ashoka (273-232 B.C.): One of the greatest rulers of the Mauryan Empire, he extended his kingdom by ceaseless conquests to embrace the whole of the Indian sub-continent. However, the sight of misery and bloodshed in the Kalinga war awakened in him feelings of repentance and sorrow and he gave up military conquests. Thereafter he evolved a policy of *dharma-vijaya*—conquest by piety. He was influenced by Buddhist teachings and did much for spreading Buddhism, inculcated virtues of compassion, liberality, and tolerance and abolished animal slaughter. He also erected pillars of morality (*dharma-sthambas*).

Aurangzeb (1659-1707): He successfully carried on a policy of territorial expansion, through ceaseless wars fought against the Rajputs and the Marathas. Aurangzeb was a zealous Sunni Muslim and observed the injunctions of the holy Quran. Undaunted by bravery, and a grim tenacity of purpose were among his prominent qualities. However, in the intensity of his religious zeal, he ignored the feelings of his subjects—this ultimately led to the disintegration of the Mughal Empire.

Aurobindo Ghose (1872-1905): An extremist leader of the Congress during the anti-partition struggle, he was involved in politics between 1902-1910, after which he devoted himself to philosophical, spiritual and literary activities. His books include *Savitri* and *Life Divine*.

an economics and Law expert, he was a social worker who fought continuously for the rights of untouchables, formed the Scheduled Caste Federation in 1942, was nominated Chairman of the Drafting Committee of the Constituent Assembly and appointed Law Minister in Nehru's Cabinet.

Bipin Chandra Pal (1858-1932): A great educationist and journalist who threw himself into politics as an extremist, he believed in wresting freedom and not begging for it and came into conflict with Gandhi on the policy of non-cooperation. He consequently left the Congress Party.

Chaitanya (1485): A famous Vaishnava saint, he displayed wonderful literary acumen in his early life, renounced the world at the age of 24 and spent his life preaching messages of love and devotion. He was opposed to priestly ritualism and believed that through love and devotion and song and dance a sense of ecstasy could be produced.

Chanakya or Kautilya: He was the Prime Minister of Chandragupta Maurya who founded the Maurya dynasty. He wrote *Arthashastra* which is an authentic account on statecraft.

Chandragupta Maurya (322-298 B.C.): He was the chief architect of the greatest of India's ancient empires.

Chandragupta-I: He started the Gupta era in 319-20 A.D. and was the first important king of the Gupta dynasty.

Chandragupta-II (380-413 A.D.): One of the greatest rulers of the Gupta dynasty, he extended his empire by marriage alliances and conquests. His reign marked the high-water mark of ancient Indian culture. He assumed the title of Vikramaditya and his court was adorned by numerous scholars like Kalidasa and Amarasingha.

Charaka: A famous physician of the 2nd century A.D., he wrote *Chakrasamhita*—an encyclopaedia of Indian medicine.

Lord Cornwallis: Governor-General from 1786-1793, his place in history rests on his reforms: **Administrative**—Directors of the company were paid handsome salaries to prevent them from accepting bribes; superfluous posts were abolished. **Judiciary**—judicial work was separated from tax collection and four provincial courts were set up. **Police**—Zamindars were deprived of police power and a police department was organised. His greatest achievement was the introduction of Permanent Settlement in Bengal.

Dadabhai Naoroji (1825-1917): Known as the Grand Old Man of India, he was one of the founder members of the Congress and was President of the party thrice. He focussed attention on the drain of wealth from India due to the British Government's economic policies; stressed the importance of women's education and also primary education; was called the father of Indian politics and economics and was the author of *Poverty And Un-British Rule In India*.

Firuz Shah Tughlaq: He succeeded Muhammad-Bin-Tughlaq as the ruler of the Delhi Sultanate. When faced with the problem of preventing the break-up of the Delhi Sultanate, he adopted the policy of appeasing the nobles, army and theologians and of asserting his authority only over areas which could be easily administered. He took steps to have Hindu religious works translated from Sanskrit

into Persian and adopted a number of humanitarian measures. Firuz Tughlaq was keenly interested in the economic improvement of the country and set up departments of public works.

Gautama Buddha (563-483 B.C.): Siddhartha grew up in luxurious surroundings till the questions of birth, old age, sickness and death led him to renounce the world and lead the life of a homeless ascetic. He attained supreme knowledge and insight at Bodhi-Gaya and came to be known as Buddha or the 'Enlightened One'. He taught his followers the Four Noble Truths—concerning suffering, its cause and destruction of sorrow, and the Eightfold path—right views, speech, aspirations, conduct, livelihood, effort, mindfulness and contemplation.

Gautamiputra Satakarni (106-130 A.D.): One of the important rulers of the Satavahanas, who were the successors of the Mauryas in the Deccan. His empire extended from Malwa in the north to Karnataka in the south.



Mughal coin embossed with Jahangir's face.

Ghiyasuddin Balban (1266-87): A ruler of the Slave dynasty, he was an experienced administrator who reorganised the armed forces, restored peace and order in the kingdom, curbed all rebellions, adopted a policy of sternness and severity and thus not only saved the Sultanate from impending destruction but also raised its prestige and majesty. Under him the Delhi Court acquired celebrity for its magnificence and housed many famous people like Amir Khusrau.

Gopal Krishna Gokhale (1866-1915): A national leader from Maharashtra and a reformer and spiritual leader, he advocated many social reforms and pleaded for mass education and higher scientific and technical education. He founded the Servants of India Society in 1905 to train men to be national missionaries.

Guru Nanak (1469-1538): He founded the Sikh religion which laid emphasis on one God. According to his philosophy one could attain salvation with love and devotion. He laid great emphasis on purity of character and conduct, denounced idol worship and pilgrimages and advocated a middle path. He aimed at bridging the gap between the Hindus and the Muslims.

Harsha Vardhana (606-647 A.D.): His accession marks the starting point of the Harsha Era—he waged incessant wars for six years and marched southwards as far as Nalanda. His empire included Kanauj, Rohilkhand, Oudh and Prayaga. One of the greatest kings of

ancient India, he restored respect for his authority in northern India in times of turmoil. He was a just and benevolent ruler, showed a taste for literature, possessed tolerance, liberality and benevolence, was a great general, a just administrator and a patron of religion and learning. He gathered around him great sages and fine intellectuals like Bano, Mayura, Divekara and Hieun Tsang.

Hemu: One of the most remarkable personalities of the 16th century, he rose from an insignificant position in life, as a small revenue officer to become a military officer and finally the commander of the army of Adil Shah. He had thrown into shade all the Afghan commanders and won every one of the 22 battles he fought from Chunar to Delhi, for his master till he was finally killed in the II Battle of Panipat.

Hieun Tsang: A Chinese pilgrim who visited the court of Harsha Vardhana. His accounts shed light on Harsha's court and life and on the economic, social and religious norms of the period.

Humayun (1530-1540): He succeeded Babar in 1530 and inherited from him a large number of problems of administration and consolidation and also had to deal with the growing power of the Afghans in the east. In the Battle of Kanauj (1540), he was defeated by Sher Shah Suri; he failed to understand the nature of Afghan power and lacked the ability to weave into a compact fabric, his rapid territorial acquisitions.

His life was a romantic one. He went from riches to rags and again from rags to riches when he recovered Delhi in 1555.

Ibrahim Lodi: The Lodi ruler succeeded Sikandar Lodi in 1517. He dealt sternly with the disloyal and defiant nobles and established his authority firmly at the centre of the empire. He had to match his strength against that of Babar in the I Battle of Panipat (1526) in which he was decisively defeated. The battle broke his power and established the Mughal rule in India.

Ibn Battuta: A South African scholar and traveller who visited India during 1333 A.D. He has written about Muhammad-Bin-Tughlaq's reign in the country.

Iltutmish (1210-1236): One of the most outstanding rulers of medieval India, he was a shrewd, cautious and far-reaching statesman and an architect of medieval Delhi. He gave the country a capital, an independent state and a governing class, gave form and content to the administrative structure and reorganised the *Iqta*, the army and currency, and transformed the loosely patched up territories of Ghurid acquisition in Hindustan into a well-knit and compact state—the Delhi Sultanate.

Jahangir (1605-1627): He brought to an end the conflict with Mewar and the Deccan and successfully broke the Afghan resistance. He was endowed with fine literary and artistic tastes and had great love for justice. In his religious views he was not narrow and took delight in conversing with men of other faiths; was a patron of arts and literature. During his reign the art of painting reached its high-water mark. New elements were added to architectural decoration and literature maintained its vitality.

Kanishka: The famous king to whom scholars have attributed the founding of the Saka Era of 78 A.D. He ruled over a vast empire from Gandhara to Oudh and Benaras. He was

THE VICTOR AND THE VANQUISHED

326 B.C.: Battle of Karri between Alexander and Porus. Victor : Alexander.

262 B.C.: Battle of Kalinga was fought by Ashoka. After this, he gave up battles and became a Buddhist monk.

1008: Ghazni invaded India, defeated combined army of Indian rulers under Anandpal.

1025: Ghazni led an expedition against Somnath temple. The temple was destroyed and idols broken. Laden with gold, Mahmud returned to Ghazni.

1191: I Battle of Tarain between Muhammad Ghori and Prithviraj Chauhan. Victor: Ghori.

1192: II Battle of Tarain between Ghori and Prithviraj. Victor: Ghori. After this, Delhi came under Turkish rule.

1398: Timur invaded India. It resulted in the drain of a large amount of wealth, gold and silver from India and marked the beginning of the disintegration of the Delhi Sultanate.

1526: I Battle of Panipat between Babar and Ibrahim Lodi. Victor: Babar. The battle established Mughal rule in India.

1527: Battle of Khanwah between Babar and Rana Sanga. Victor: Babar. It secured Babar's position in the Delhi-Agra region.

1539: Battle of Chausa between Humayun and Sher Shah Suri. Victor: Sher Shah.

1540: Battle of Kanauj between Humayun and Sher Shah. Victor: Sher Shah. The battle established Afghan rule in north India.

1556: II Battle of Panipat between Akbar and Hemu. Victor: Akbar.

1565: Battle of Talikota between the Vijaynagar and Bahmani kingdoms. It marked the end of the great age of Vijaynagar.

1576: Battle of Haldighati between Akbar and Rana Pratap of Mewar. Victor: Akbar.

1658 (May): Battle of Samugarh between Dara and Aurangzeb.

Raghnath Rao was pensioned off. This treaty established the dominance of the British as a controlling factor in Indian politics.

1780-84: II Mysore War between the English under Warren Hastings and Haider and his son Tipu Sultan. By the Treaty of Mangalore in 1784, both sides restored all conquests and agreed to release prisoners of war.

1780-82: III Mysore War between the English under Lord Cornwallis and Tipu Sultan. Victor: The English. By the Treaty of Srirangapatnam, Tipu ceded half of his territories and paid 30 lakhs as indemnity.

1799: IV Mysore War between the English under Lord Wellesley and Tipu. Victor: The English. Tipu was killed and his territories annexed by the English.

1802: Treaty of Bassein. By this treaty the Peshwa Baji Rao II entered into a Subsidiary Alliance with the English. The treaty was a great achievement for the English because it brought the Marathas under their control.

1803: II Maratha War between the English under Lord Wellesley and Maratha powers Scindia and Bhonsle. Victor: The British. By the treaty of Deogson Scindia accepted the Subsidiary system and Bhonsle and Scindia surrendered the territories of Cuttack, Ahmednagar and Broach.

1804-05: III Maratha War between the English under Lord Wellesley and Holkar, one of the Maratha Chiefs. After this, the Maratha chiefs existed at the mercy of British power.

1806: Treaty of Lahore between Ranjit Singh, the ruler of Punjab and the British. By this treaty, both sides agreed not to give shelter to each other's enemies.

1809: Treaty of Amritsar between Ranjit Singh and the British by which the River Sutlej was regarded as the boundary line between the



A siege (from a relief at Sanchi, beginning of the Christian era).

Victor: Aurangzeb.

1659: Battle of Deora: between Dara and Aurangzeb. Victor: Aurangzeb. He defeated Dara and succeeded to the throne.

1761: III Battle of Panipat between Ahmad Shah Abdali and the Marathas. The Marathas were routed, the defeat gave the English East India Company the opportunity to consolidate its power in India.

1745: I Carnatic War between the British and French. The English captured Pondicherry, the French occupied Madras. In 1748, peace was made and Madras was restored to the English.

1748-55: II Carnatic War between the British (Robert Clive) and the French (Dupleix). The English were successful and by the Treaty of Pondicherry in 1755, both sides returned each other's territories.

1756-63: III Carnatic War. In the Battle of Wandiwash in 1760, the French were defeated and this battle sealed the fate of French power in India.

1757: Battle of Plassey between the English and the Nawab of Bengal, Siraj-ud-Daulah. Victor: The English. Plassey paved the way for British mastery of Bengal and eventually the whole of India.

1764: Battle of Buxar between the English and Mir Qasim (Nawab of Bengal), Shuja-ud-Daulah (Nawab of Oudh) and Shah Alam (Mughal Emperor). Victor: The English. The battle demonstrated superiority of British arms and established them as masters of Bengal, Bihar and Orissa.

1767-69: I Anglo-Mysore War between the English in alliance with the Nizam of Hyderabad and Haider Ali of Mysore. Haider repulsed British attack, and threatened Madras. The Madras Government agreed to his terms and by the Treaty of Madras both sides restored conquered territories.

1775-82: II Maratha War was fought between the English and the Marathas under Nana Phadnis. The treaty of Salbai was signed by which Marathas and British were recognised as Peshwa and

two powers, and, both sides agreed not to interfere in the internal affairs of each other.

1814-15: War with Nepal under Lord Hastings. Victor: The English. By the Treaty of Sagauli, Nepal accepted a British resident and ceded the districts of Garhwal and Kumaon.

1817-18: IV Maratha War between the English under Lord Hastings and Peshwa Baji Rao II. Victor: The English. The treaty of Poona was signed by which the Peshwa accepted the dissolution of Maratha confederacy, agreed to the stationing of British troops in his country and transferred rights over Bundelkhand and Malwa to the company.

1824-26: I Burmese War under Lord Amherst. Victor: The English. Treaty of Yandaboo was signed.

1839-42: I Afghan War between England under Lord Auckland and Dost Muhammad, the Afghan ruler. The war proved disastrous for the English.

1844-48: I Sikh War. Victor: The British under Lord Hardinge. By the Treaty of Lahore, the Sikhs had to pay a War indemnity of one and the half crores, and their power was reduced.

1848-49: II Sikh War under Lord Dalhousie. Victor: The English. Punjab was made a part of the British Empire.

1852: II Burmese War under Lord Dalhousie. Victor: The English.

1878-80: II Afghan War under Lord Lytton. Victor: The English. By the Treaty of Gandamak, Yakub Khan, the Afghan ruler accepted the districts of Kurram, Peshawar and Sibi.

1886: III Burmese War under Lord Dufferin. Victor: The English. the whole of Burma became a part of the British Empire.

1919: III Afghan War under Lord Chelmsford. Victor: The English. By the Treaty of Rawalpindi, the annual subsidy that was paid to the Amir by the British was stopped but he was given the freedom to pursue an independent foreign policy.

for his achievements and for the patronage he extended to the religion of Sakya-muni. During his time a great Buddhist council was held at Kashmir in which Buddhist scriptures were examined and commentaries were prepared on them. The most eminent of the poets of his court was Asvaghosha who wrote the *Buddha Charita*.

Krishna Deva Raya (1509-1530): A gallant and active warrior, always successful in the wars that he waged throughout his reign. He extended his empire upto south Konkarn in western India, Vishakapatnam in the east and the extreme border of the peninsula in the south. His reign was remarkable for the encouragement and development of art and letters. His kindness to the fallen enemy, acts of mercy and charity, great military prowess, imposing personal appearance, polite conversation and solicitude for the welfare of his people mark him out as one of the greatest of the monarchs of south India.

Lala Lajpat Rai (1865-1928): Known as Lion of Punjab he was an Arya Samaj leader who worked for social and educational reforms. He organised Swadeshi movements on a large scale and established the Indian Home Rule League in the US; was brutally beaten up while leading a protest procession against the Simon Commission in Lahore and died of injuries. His most famous work is *Unhappy India*. He also brought out a journal *Young India*.

Mahavira (540-468 B.C.): His early life is shrouded in obscurity. Mahavira led the life of a householder till the age of 30, after which he renounced the world and attained highest spiritual knowledge called *keval gnan* at Rijupalika. He was not the founder of a new religious sect but the last of a long succession of 24 Tirthankars. He emphasised the need for discarding all material desires to attain complete freedom from bondage and to follow the three-fold path of Right Belief, Right Knowledge and Right Conduct.

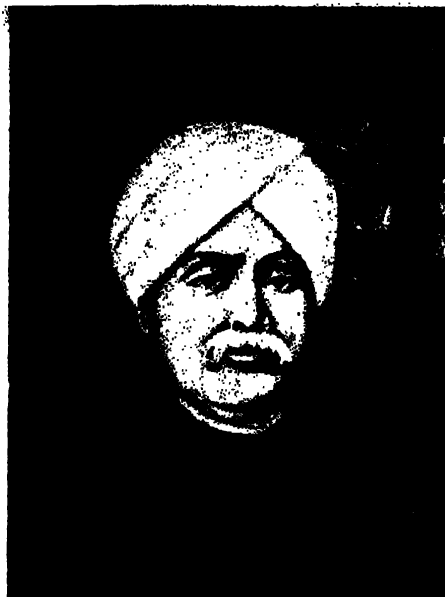
Mahmud Ghazni (988-1030): Considered a hero of Islam by medieval Muslim historians because of his stout defence against the Central Asian Turkish invaders. In India he is remembered as a plunderer and a destroyer of temples (Somnath Temple).

Malik Ambar: The Peshwa of the Ahmednagar ruler Nizam Shah II and one of the important personalities of south India, he successfully fought against the Mughal entry into the Deccan, tried to improve the administration of Ahmednagar by introducing Todar Mai's system of land revenue and adopting the *zabt* system.

Megasthenes: A Greek ambassador at the court of Chandragupta Maurya, he lived in the Mauryan capital Pataliputra and wrote an account of the Mauryan Empire as a whole. His works throw valuable light on the administration, society and economy of the times.

Mohammed Ali Jinnah (1875-1948): A Karachi-born lawyer, till 1920 he was non-communal, opposed separate electorate for the Muslims and was associated with the Congress party and the Home Rule League. At the London Round Table Conference, he genuinely tried to solve the communal problem. In 1934-35 he became the undisputed leader of the Muslim League and worked for a separate Pakistan.

Muhammad-Bin-Tughlaq (1324-1351): Endowed with a keen intellect, a wonderful memory and a brilliant capacity of assimilating



Lajpat Rai : Lion of Punjab.

knowledge, he is best remembered as a ruler who undertook a number of bold experiments (transfer of capital from Delhi to Devagiri, introduction of token currency and a scheme to extend and improve cultivation in Doab) most of which proved impracticable and brought disaster to his kingdom. Popular discontent found expression in open revolts against his authority and the whole of his reign was distracted by repeated rebellions. It was the beginning of the process of disintegration of the Delhi Sultanate.

Nizamuddin Auliya: The most respected of the Sufi saints, he left an everlasting impact on society. At the age of 16, he left Badayun, his birth place and came to Delhi and settled in Ghiyaspur, lived a simple life and kept himself away from the politics of the Delhi court. He attained spiritual enlightenment at the age of 19. According to his philosophy, "The ultimate objective for which man is created is to love God. Allah bestowed this upon whomsoever he chose. It could not be acquired by training or toil."

Pulakesin-II (609-642): The most famous Chalukya King, he compelled the neighbouring areas of Mysore and Kadambas to acknowledge his suzerainty, defeated Harsha's army on the Narbada and checked his advance into the Deccan. He was killed in a fight against the Pallavas in 642 A.D.

Prithviraj Chauhan: Ascended the throne of Ajmer around 1190, embarked upon a career of conquest and came into conflict with Muhammad Ghori. He was defeated by him in the II Battle of Taran in 1192.

Robindranath Tagore (1861-1941): A poet of high distinction, his first play *Rudra Chandra* was published in 1883, first novel *Bowthakurania* in 1883 and *Gitanjali* in 1910. His *Gora* portrayed the National Freedom movement. His works—*Mashi*, *Hungry Stones*, *Post Master*, *Gardener*—reflect his artistic talents, spiritual evolution, and loftiness of thought. In 1921, he founded the Viswa Bharati and started Santiniketan. Tagore's *Jana Gana Mana* portrays patriotism. He got the Nobel Prize for Literature in 1930 for his collection of poems *Gitanjali*.

Raja Ram Mohan Roy: A true representative of the spirit of modern India, he began his reforming activities by preaching unity of God. He ridiculed blind faith, costly sacrifices and superstitions—his greatest achievement was the foundation of Brahmo Samaj in 1828; was a great pioneer of English education, directed his reforming activities against the abuses of Hinduism especially sati; was a champion of the liberty of the Press. In short he presented a most instructive and inspiring study for the new India which he personified and embodied the new spirit of freedom of enquiry.

Rajaraja Chola (985-1014): The greatest of the Chola rulers who followed a policy of expansion. This was carried forward by his son **Rajendra-I (1012-1044)** who brought the Pandyan and Chera countries under his sway. Both marked their victories by erecting a number of Siva and Vishnu temples at various places. During their period there was political integration and cultural development in south India, trade and commerce flourished, and temple architecture reached its climax.

Ramanuja: A great religious thinker of the 12th century, he gave a philosophical basis to the teachings of Vaishnavism; believed in the existence of only one God but did not exempt him from form and qualities. So his doctrine is called the Visishtadvaita or Qualified Monism.

Rana Pratap (1572): The greatest ruler of Mewar, he put up a very determined stand against Akbar at a time when most of the Rajput states had surrendered. He was, however, defeated in the Battle of Haldighati in 1576.

Ranjit Singh: Called Sher-e-Punjab, he is regarded as the founder of Sikh rule in Punjab. A born ruler of men he transformed the warring Sikh states into a compact national monarchy and conquered one country after another by his cautious and careful military policy. He was a successful administrator, and organised the Central and provincial administration, reformed the revenue and judicial systems and organised his army on new lines.

Robert Clive: He proved a great success as a soldier giving the first example of his military talents in the II Carnatic War (1749-55) when he defeated Duplex, the French statesman, and saved English prestige in the Deccan. In 1757 he defeated Siraj-ud-Daula, Nawab of Bengal in the Battle of Plassey which paved the way for British conquest of India. During the first governorship (1757-60), he consolidated British power in Bengal and Deccan; during the second (1765-67), he devoted himself to the task of reforming the company's civil and military services and introduced dual government in Bengal by which the administration of Bengal was carried on by two powers—the British and the Nawab of Bengal.

Raziya (1236-39): Belonging to the Slave dynasty she was the first woman to sit on the throne of Delhi. Raziya was endowed with admirable attributes and qualities necessary for a Queen, exhibited great courage in dealing with the Turkish nobles who opposed her authority and with the provincial governors. Her rule lasted for nearly three years.

Samudragupta (355-380 A.D.): The greatest of the Gupta rulers, he made an onslaught on the neighbouring regions—Ganga Yamuna doab, eastern Himalayan states, Nepal, Assam and Bengal.

Sardar Vallabhbhai Patel (1875-1950): A leading barrister of Gujarat, he led the Bardoli Satyagraha in 1928 and presided over the Congress session in 1931. He is remembered for his efforts to integrate princely states into one India. Popularly known as Sardar and 'Iron Man of India', he was an efficient administrator who reorganised the ICS.

Sarojini Naidu (1879-1948): Known as the Nightingale of India, she was a gifted poetess of the English language. She took part in India's freedom struggle and became the President of the Indian National Congress in 1925. She was the first woman to become the Governor of an Indian state (UP).

Sayyid Ahmed Khan: The most important reformer among the Muslims, he was impressed by modern scientific thought and worked all his life to introduce it in Islam. He interpreted the Quran, which he considered as the only authoritative work on Islam, in the light of contemporary rationalism and science; urged people to develop a critical approach in life and practise freedom of thought; was against fanaticism, narrow mindedness and exclusiveness; and was a great believer in religious tolerance. His reformist zeal also embraced the social sphere.

Shah Jahan (1627-1659): Mainly involved with the suppression of the Portuguese, the Bundelas, and Rajputs, the annexation of Ahmednagar, the defeat of Golconda and Bijapur, his reign is considered to be the golden age of Mughal rule in India. There was uninterrupted peace, better financial condition, pomp and splendour attested by brilliant architectural feats like the Taj Mahal, Pearl Mosque and Jami Masjid. He was a great scholar—during his period *Badshahnama* of Abdul Hamid Lahiri and *Muntakhabut Lubab* of Khafi Khan were written.

Sher Shah Suri (1540-1545): He deserves the credit of overthrowing the Mughal dynasty. He became the undisputed ruler when he defeated Humayun in the Battle of Chausa in 1539 and then in the Battle of Kanauj in 1540. His empire extended from Brahmaputra in the east, to Jhelum in the west, from Himalayas in the north to Narbada in the south; he was an industrious man, and the architect of a brilliant administrative system. Wise and salutary changes were effected in every branch of administration. His revenue reforms served as a model for the future agrarian system. His military character was marked by a rare combination of caution and enterprise, his political conduct was just and humane, and religious attitude free from medieval bigotry. He had an excellent taste for building work as is attested by his mausoleum at Sasaram.

Shivaji: Crowned ruler of the Marathas in 1674. His mother Jija Bai and his teacher Dadaji Khondave's influences made him bold and enterprising. He captured the hill fort of Torna in 1648 and within the next few years the forts of Raigarh, Kandaha and Purandhar. He waged successful wars against the sultans of Bijapur, and Golconda and also against the Mughals. He was a constructive genius, a brave soldier, a born leader who elevated himself by the dint of unusual bravery and diplomacy, from the position of a *jagirdar* to that of a *Chattrapati*. The most brilliant of his achievements was the weaving together of the Maratha race into a mighty nation.

Subhas Chandra Bose (1897-1945): Selected for the ICS but resigned in 1920. A prominent left wing leader of the Congress, he was elected its President in 1938 and 1939. He later founded the Forward Bloc and went to Germany and Japan to organise armed liberation of India. In 1941 he founded the Indian National Army and gave the well-known slogans *Jai Hind* and *Dilli Chalo*.

Subramania Bharati (1882-1921): Closely associated with the extremist movement in the Congress, he was first and foremost a poet who wrote fine poems and devotional songs and gave spiritual dimensions to India's thirst for freedom. His major works include *Panchali*, *Sabatham* and *Kuyil Pattu*.

Surendranath Banerjee (1848-1925): A member of the ICS, he later became the pioneer of the nationalist agitation in India. In 1876 he founded the Indian Association aiming to make it the centre of the Indian National Congress.

Swami Dayanand Saraswati: The founder of the most vigorous, lasting and effective social and religious organisation set up in the 19th century in India, viz. the Arya Samaj. His motto was 'Go back to the Vedas'. He propagated Vedic religion and reform of the Hindu society; raised his voice against polytheism, and child marriage, encouraged female education and remarriage of widows; began the Suddhi movement which was meant to realise the ideal of unifying India nationally, socially and religiously; published his views through printed books, his most famous work being *Satyarta Prakash*.

Timur: He invaded India in 1398. It was a plundering raid, the motive being to seize the wealth accumulated by the Sultans of Delhi. The invasion resulted in the drain of a large amount of wealth from India and marked the end of the Delhi Sultanate.

Tipu Sultan: An able and industrious ruler of Mysore, he is a remarkable personality in Indian history. He was a valiant soldier and a tactful general who placed independence above everything else and lost his life in trying to preserve it.

Todar Mal: One of the nine gems of Akbar's court, he was the Finance Minister during his reign. He reformed the revenue system, i.e., introduced the *zabti* system, according to which he got the total land measured,

divided it into four classes according to the fertility of the soil and fixed the state's share at one-third of the actual produce. He was also a general and a statesman who helped Akbar in annexing Bengal and the north-west frontier.

Tulsidas: Belonged to the 16th century and was known for his high poetic vision and fervent devotion. He believed in the theory of karma and captured the imagination of people by claiming that God lived and moved on earth. He did not preach any new doctrine or found a new sect, yet the magic of his poetry did much for the spread of Bhakti Movement. Most noteworthy among his compositions are *Gitavali*, *Vineyapatrika* and *Ramacharitmanas*.

Vinoba Bhave (1895-1982): Closely associated with the National Movement under Gandhiji's leadership he was the first individual *satyagrahi* selected by Gandhi. His Bhoodan Movement, started in 1951, was quite successful. He was a multi-linguist who advocated universal brotherhood transcending national barriers.

Warren Hastings (1774): He preserved the British empire in India and made it secure overcoming problems like the complete breakdown of administrative machinery, financial bankruptcy and the hostility of the Marathas and Haider Ali, with great courage and determination. He introduced several reforms: **Administrative**—Brought an end to the dual system in Bengal, relieved the Nawab of Bengal of his administrative work and forbade the servants of the company to carry on private trade. **Revenue**: Set up a Board of Revenue in Calcutta to facilitate revenue collection. **Commercial**: Set up a Board of Trade and ordered a reduction of 2.5% on all goods. **Judicial**: Established civil and criminal courts in each district.

Lord Wellesley (1798): Credited with having consolidated the British empire, he was mainly remembered for his policy of Subsidiary Alliance (i.e., the states which entered into the alliance were to make no wars and carry on no negotiations with any other state without the knowledge and consent of the British Government. He defeated the enemies of the company—the Marathas and Tipu Sultan—one by one and annexed the Carnatic, Tanjore and Surat. In short, by his extensive conquests and annexations, he changed a commercial company into a great political power.

POLITICS & ECONOMY

Mauryan times: **Source**: Kautilya's *Arthashastra*. Administration of towns: the big towns were administered systematically. Pataliputra was divided into four zones, each zone under a *sthanik* who was assisted by *gopas*, junior officers, each of whom looked after the well-being of 10 to 40 families. Espionage system: spies at home and abroad. Shipping: a special officer at each port to control movements of ships and boats and charge taxes from merchants, travellers and fishermen.

Ashoka: He gave up an imperialistic policy and adopted a policy of service and welfare. He appointed *dharma mahamatras* to improve the morals of the people. He ordered his officers to serve humanity, tour over their areas to come into close contact with the people and

help solve their problems.

Balban: Built a strong and centralised army and for this he reorganised the *diwan-i-arz* (military department) and pensioned off many old soldiers. He raised kingship above commonality and introduced *sijda* and *palbos* (prostration and kissing the monarch's feet) which were considered un-Islamic. Followed a policy of "blood and iron" ruthlessness.

Alauddin Khilji: Land revenue, military and market reforms. He demanded half the produce as land revenue and took stern action against the village headmen (*muqaddams*) and smaller landlords (*khuts*). He decided to do away with the *iqta* system and to pay his soldiers in cash. Since the treasury had limited resources, he reorganised the market and fixed

the prices of goods so that necessities were available cheap. To cut down the power of the nobles, they were forbidden to hold banquets or festivities, or to form marriage alliances without the permission of the Sultan.

Muhammad Tughlaq: Transferred the capital from Delhi to Devagiri, renamed Daulatabad and back again. Introduced token copper currency but failed to take precautions so that it could not be minted anywhere but at the royal mint. There was galloping inflation and the measure failed. Launched a scheme to extend and improve cultivation in the doab. Set up a department called *diwani-i-kohi*; attempts were made to induce the peasants to produce superior crops. The scheme failed because he demanded half the produce for the state and there was a famine. He gave high offices to Muslims who did not belong to noble birth, but the older families resented this.

Firuz Shah Tughlaq: He revived the *iqta* system and made it hereditary. He extended this principle to the army as well. He tried to win over the *ulema* by stating that he was a Muslim King and his was an Islamic state. However, he banned inhuman punishment like maiming and set up a department of public works to look after his building projects.

Sher Shah: Currency reforms: struck fine coins of gold, silver and copper of uniform standard, attempted to fix standard weights and measures. Land revenue: land was measured, schedules of rates drawn up, laying down the state's share of the different types of crops. This was converted into cash on the basis of prevailing market rates. The land was divided into good, bad and middling and the state share was one-third. Administration: divided his empire into provinces, *sarkars*, *parganas* and villages, the village being the unit of administration. Each had specific offices with specific duties. Army: Every soldier had his descriptive roll (*chehra*) recorded and his horse branded (*dagh*).

Akbar: Mansabdari system: organised the civil and military establishments into one unit with each officer being given a rank (*mansab*), which was divided into *zat* and *sawar*, the *zat* being the personal rank, which entitled him to a personal pay and the *sawar* being the obligation to keep a specified number of horsemen. Land Revenue: Dahsala system, under which the average produce of different crops and their average prices prevailing over the last 10 years were calculated and one-third of the average produce was demanded as the state share. The state demand was fixed in rupees per *bigha*. The system was known as the *zabti* system. Army: Every noble had to keep mixed contingents. Administration: division of power on the basis of checks and balances, for instance the *wakil* and the *diwan (wazir)*.

Jahangir: Introduction of the *du-aspe-sih-aspa* (*mansabdar* holding this rank had to maintain and was paid for double the quota of troopers indicated by his *sawar* rank) rank in the mansabdari *sawar* rank.

Shah Jahan: Introduction of a system by which a *mansabdar* could only keep 1/3 1/4 or 1/5 of the number mentioned in his *sawar* rank. Also introduction of month scales in the payment of the *mansabdars*.

Aurangzeb: Re-introduction of *jizya*.

BRITISH INDIA

Regulating Act 1773: Made changes in

Constitution of the Court of Directors of the East India Company and subjected their actions to the supervision of the British Government.

Pitt's India Act 1784: Gave the British Government supreme control over the company's affairs and its administration in India.

Permanent Settlement 1793: The *zamindars* and revenue collectors were converted into landlords and their right to ownership was made hereditary; the *zamindars* were to give 10/11 of the rental they received from the peasantry to the state, but the land revenue was fixed in perpetuity.



Lord Cornwallis: Reorganised the company's civil service. Also known for the Cornwallis Code—an elaborate new code of regulations for the guidance of the officers of his new judicial system.

SOCIETY & RELIGION

From the early times, India has predominantly been an agricultural society, with a majority of its population involved in cultivation. This, however, did not foreclose urban life and the very first examples of cities can be found in the earliest civilisations of which we have concrete evidence in the country. The Mohenjodaro and Harappan civilisations appear to have been centred round cities and the people of the time seemingly enjoyed a high level of urban culture. Different hair-styles, the use of face paints, collyrium, perfumes and lip-colouring were not unknown. The discovery of a large variety of dice, figures of dancers and toys indicate the different sources of amusement prevalent in those times.

However, apart from concluding that India was primarily an agricultural society with several highly developed urban centres, it is difficult to explain the nature of social conditions in India, in exact historical terms, until quite late in the medieval times—the reason being lack of actual evidence. Most historians and chroniclers concentrated on the situations in the courts and the conditions of the upper classes; and almost ignored the position of the majority. However, a number of foreigners visited India in different periods of time and their accounts have proved very useful from the social point of view. Among these visitors, the names of Megasthenes (Mauryan times), Fa-hien (399-414 A.D.), Hsien Tsang (629-45 A.D.), I-tsing (673-95 A.D.), Alberuni (who accompanied Mahmud Ghazni to India), Athanasius Nikitin (1475), Varthema (1503-8),

Charter Act 1813: The trade monopoly of the company in India was ended and trade with India was thrown open to all British subjects.

Charter Act 1853: Decided that all recruits to the civil service were to be selected through a competitive exam.

Act of 1858: Transferred power of government from the East India Company to the British Crown.

Indian Councils Act 1861: Enlarged the Governor-General's Council for the purpose of making laws in which capacity it was known as the Imperial Legislative Council. It also created Provincial Legislative Councils.

Indian Councils Act 1909: Morley-Minto Reforms: increased the number of elected members to the Imperial Legislative Council and the Provincial Councils, but most of the members were elected indirectly. Also introduced the system of separate electorates under which Muslims were grouped in separate constituencies.

Government of India Act 1919: Clarified the function of the Central and provincial governments. The Central Legislature was made bicameral with the Council of State and the Legislative Assembly as the two chambers.

Government of India Act 1935: Provided for the establishment of an All India Federation and a new system of government for the provinces on the basis of provincial autonomy. The federation was to be based on a union of the provinces of British India and the princely states.

Barbosa (1518), Monserrate (1590-91), Ralph Fitch (1583-91), Thomas Roe (1615-19), de Laet (1613), Bernier (1656-68), Tavernier (1640-67) and Manucci (1699-1709) are worth mentioning.

Facts on social life in India can also be gathered from epics like the Ramayana and the Mahabharata, religious books like the Vedas, the Brahmanas, the Aranyakas and the Upanishads, traditional literature as represented in the Puranas and the treatises and Smritis of later times.

From the early Vedas we learn that the foundation of social life in the Rigvedic times was the family, with the *grihapati* exercising his full authority over all members of the family. Religion was based on the concept of one God, though many gods prevailed. These in fact, were mostly manifestations of that one God, though people were also partly influenced by nature worship. An important religious practice was the performance of sacrifices (*yajnas*) and recital of daily prayers.

Caste System

Though the caste system has an early origin, it is not definite as to when and how it originated. The basis was probably 'colour' and caste may have come into the picture while differentiating between the fairer Aryans and the darker non-Aryans who were called *dasys*, *dasas*, etc. The use of the word *varna* (colour) for caste, lends credence to this theory. Later, however, there was a division of labour among the Aryans and some historians trace back

caste to this very fact. The four classes (*varnas*) mentioned in early Indian literature are the Brahmins, whose main duties were to perform *yajnas* and acquire and impart knowledge; the Kshatriyas, whose main duties were to fight wars and carry on the work of the government; the Vaishyas, who carried on the work of trade, industry and agriculture, and lastly the Sudras, who were aborigines and offsprings of inter-marriages between Aryans and the aborigines. The Sudras were meant to serve the other three classes. Initially, the caste system was not rigid and a change in occupation went side by side with a change in the person's caste. For instance, Parshu Ram, a Brahman, became a Kshatriya because of the change in his vocation. In due course, however, birth became more important than occupation in determining caste and the system assumed rigidity. The Brahmins also played an important role in furthering caste rigidity by selfishly maintaining their own superiority. They specialised in individual crafts and were unwilling to impart their acquired skills to outside groups. In the *Sutras*, definite rules were laid down that ensured birth as the determining factor in the caste system. Foreign elements, inter-marriages, the rise of new sects like the *Satnamis*, *Kabir Panthis* and *Vaishnavites* led to the formation of new castes; and at present, there are over 3,000 castes and sub-castes in India. During the medieval times the caste system became even more rigid. This can be partly explained as a self-defence measure. The *Smritis* of the time assigned a high place to the Brahmins, although they laid down that in the *Kali Yuga*, Brahmins could not live just by performing their priestly duties and therefore, they could indulge in agriculture and other trades. The severest restrictions were placed on mingling with the *chandals* and other outcasts.

It was only during the British times that the caste system showed signs of break-down. The British rule released many forces like the introduction of modern industries and railways and buses which gradually undermined the caste system. Also the rigidity of caste could not put up a barrier against modern urbanisation. Free sale of land also upset the caste balance in many villages. The close connections between caste and vocation could hardly continue in a modern industrial society where the profit motive was increasingly becoming dominant. Further, the Britishers introduced the law of equality and gradually opened the doors of administration to all castes. Moreover, the new educational system was wholly secular and strictly opposed to caste distinctions. Independent India finally sealed caste distinctions by making untouchability illegal.

Reform Movements

Within the Hindu society, however, there were religious reform movements time and again, which had partly been motivated by the aim to abolish caste. Among the earliest was Jainism, which primarily revolted against the caste system, the complications of Hindu ritualism, and the predominance of the Hindu religion. Jainism spread in the 6th century B.C. and Mahavira is generally accepted as the founder, though, according to the Jains, he was the 24th and the last Tirthankara (saint possessing the divine power of granting salvation to his disciples). Jainism later separated

into two sects—the *Digambaras* and the *Swetambaras*. Buddha also tried to reform Hinduism in the 6th century B.C. by emphasising *ahimsa* setting a simple code of conduct for those who wished to achieve *nirvana* (freedom from the cycle of birth and death), and denouncing the caste system. Buddhism was more organised than Jainism and missionary organisations (*sanghas*) were set up to spread Buddha's teachings. However, Buddhism, too, later split into two sects: Mahayana Buddhism, followers of which began to worship Buddha as God, adopted Sanskrit and began to emphasise worship, prayer and ritualism; and Hinayana Buddhism, which was the old sect, the followers of which never indulged in idol worship. Four Buddhist councils were held (in 487 B.C., 387 B.C., 251 B.C., and in 1st century A.D.) under Kanishka when important policy matters were discussed. In this period the popularity of Buddhism in India was partly due to royal patronage. Some of the most important rulers of ancient India like Ashoka, Harsha and Kanishka had converted themselves to Buddhism.



A Chakravarti or Universal Emperor: Conqueror of all the four quarters and exalted to semi-divine status. Sketch shows on his right, the wheel (symbolising universal empire) and his chief queen. On his left, the chief minister and the crown prince. At his feet the imperial elephant and horse.

In the medieval times, the rise of the Sufi and Bhakti movements helped to somewhat loosen the bonds of caste. The important *Sufi silsilahs* (mystic orders) in India were the *Chistia* and *Surhwardi silsilahs*. They were both *baishara* orders and followed the Islamic law (*shara*). There were in addition, *be-shara* saints (those not bound by the *shara*) who became figures of popular veneration. The ideas of the Sufi saints regarding the nature and relationship of God, soul and matter were similar to those of the Hindu *yogis* and they found easy acceptance in India. Their ideas were humane, encompassing Hindus and Muslims alike. They were responsible, together with the Bhakti saints, for cleansing the polluted atmosphere in the caste system. The seeds of the Bhakti movement lay in the *Vedas*—the adoration and worship of a personal God—but the movement spread all over India, mainly in the medieval period. The Bhakti saints disregarded the rigidities of caste system and carried their message of love and personal devotion to God, to all classes of society. Among the best known Bhakti saints are Namadeva, Ramananda, Ravidas (a cobbler by

class), Kabir (a weaver), Guru Nanak (a barber), Sodhere (a butcher), Nanak (the founder of the Sikh religion), Chaitanya (who even converted Muslims into the Vaishnava faith), Tukaram, Eknath and Mira Bai.

In modern times, a religious reform movement spread in all parts of India. The outcome was the creation of a number of organisations aimed at reforming Hinduism and also denouncing caste: the Brahmo Samaj, the Prarthana Samaj, the Arya Samaj, the Ramakrishna Mission, the Theosophists, and the Social Conference. The religious reform movements of modern times were based on reason and humanity. They appealed mainly to the rising middle class, that tried to rid itself from anti-intellectual religious dogmas and blind faith. They opposed rituals, superstitions, irrationalities and obscurantism in Indian religions. The humanist aspect of religious reform was expressed in the general attack on priesthood and rituals and emphasised on the individual's right to interpret religious scriptures in the light of reason and human welfare.

Social Classes

To study social classes in India, it is necessary, to divide Indian history into three different periods: ancient, medieval and modern. Initially, the Brahmins were the most respected class in the country, but in the later Vedic period, they lost much of their state power, which was now concentrated in the hands of the Kshatriyas and the centre of gravity shifted to the King. Megasthenes, writing on the Mauryan times, mentions seven classes—the philosophers; the King's councillors; the soldiers (who were Kshatriyas) the minor officers; the cultivators (who constituted the bulk of the population); the merchants, traders, artisans and boatmen (who controlled the trade and commerce of the country); and the hunters (who made their living by hunting and rearing cattle). This kind of classification probably existed right through the ancient period, with the number of classes increasing with time. The accounts of foreigners show that the people were, in general, rich and prosperous as well as simple, honest and trustworthy.

In the medieval period, two broad classes can be identified—the rulers and the ruled. In the first class were the sultans and the nobility, who enjoyed a standard of living which was comparable to the highest standard in the world at that time and who enjoyed luxuries at the expense of the ruled. At the other end was the exploited class, which contained the masses—the cultivators. The land revenue varied from one-third to half the produce. All this combined to make the cultivators extremely poor, although the land continued to be very fertile, as Ibn Batuta testifies. All the peasants, however, did not live at the level of subsistence. The village headmen (*muqaddams*) and smaller landlords (*khatas*) enjoyed a higher standard of living for the most part. The Hindu *rais* or autonomous *rajas*, too, for the most part, continued to hold their previous estates. A class apart was the trading and merchant class, which catered to the luxuries of the courts of the Sultan and the nobles. According to the historian Zia-ud-din-Barani, some of them became so rich that the nobles borrowed money from them. A fourth class consisted of the slaves and domestics. The favoured slaves enjoyed a reasonably good status in life and some of them even rose to be kings and nobles. The position of the domestic servant was

Mansabdari System

In the later medieval period, the condition of the peasantry continued to be poor, while that of the nobility was, perhaps even better. The entire civil and military official class was organised in the *mansabdari* system, with the *mansab* signifying the rank of an officer. Thus, the higher nobility, the lesser nobility and the lesser officials were all classified *mansabدار*. In lieu of cash payment, the *mansabdar* was often given the right to land revenue of a certain area called *jagir*. Thus the *mansabdar (jagirdar)* belonged to the ruling class and it was partly as a result of his exploitation of the peasantry that an economic crisis developed in the late 17th and early 18th centuries. This was one of the major causes of the downfall of the Mughal Empire.

The British Period

Social classes underwent a radical change in the British times. It was in the interest of the British to curb the ruling class of the medieval times. As a result the former ruling class became impoverished. At the same time, the condition of the peasantry did not improve because of increased exploitation of the British who drained the India's wealth out of the country. There was the growth, however, of a number of new classes, viz. the *zamindars*. This class had existed in earlier times as intermediaries, but now they were given ownership rights over the land which they controlled. As a result of partial industrialisation, growth of education and urbanisation, two new classes developed—the middle class and the working class. The middle class consisted mainly of small industrialists and professionals while the working class was made up of factory workers, construction workers, railway workers, etc.

Position of Women

In this context, it is worth mentioning the changing position of women in India. In the early Vedic period, the Indian women enjoyed a very respectable position in society, was considered the mistress of the house and took part in all religious ceremonies. She began to lose her position in the epic age, when women were excluded from political life as well as from the right to inheritance. Although higher education was imparted to women, the institution of polygamy became more prevalent leading to a loss of status in the religious and social spheres. Throughout the ancient period, the decline continued, although they continued to be respected. The Rajputs gave them a high place of honour and there was no *pardah* system for the major part. However, the institution of sati and female infanticide gradually crept in. Thus, despite the honour given to women, it was obvious that they were considered a burden and were totally dependent on men. This dependence increased with the advent of Muslims and the large-scale use of *pardah*, which prevented women from being self-sufficient. *Pardah* was widespread in the upper classes, both among the Hindus and the Muslims. Neither did Hindu women have a right to inherit property nor did they enjoy the right to dissolve an undesirable marriage.

Women, on the other hand, lost the right to divorce, if only theoretically, and could inherit half the property that a man could. Education was denied to women.

However, during British times, moved by the humanitarian and egalitarian impulses of the 19th century, the social reformers started a powerful movement to improve the position of women. The British administrators made sati and child infanticide illegal and reform societies and religious organisations worked hard to spread education, encourage widow remarriage, prevent child marriage, enforce monogamy and enable middle class women to adopt different professions or take up public employment. The national movement gave a further stimulus to the movement for the liberation of women. Women took an active role in the freedom struggle, marched in political processions, went to jail for non-cooperation,

and stood for election to state Legislatures and even took part in terrorist activities. In the 1920s, a women's movement led by the All India Women's Conference founded in 1927, developed in the country. The aim was to enlighten women.

After independence, Articles 14 and 15 of the Indian Constitution (1950) guaranteed complete equality for men and women. The Hindu Succession Act of 1956 made daughters and sons co-equal heirs to property and the Hindu Marriage Act of 1955 permitted dissolution of marriage on special grounds.

To summarise, it can be seen that there has been an increase in the number of classes and castes through the ages, together with an increase in the number of religions which have left their mark on society. No wonder the Indian society is a unique blend of caste, class and religions.

THE FREEDOM MOVEMENT

The second half of the 19th century witnessed the flowering of national political consciousness and the growth of an organised national movement in India. The revolt of 1857 has been claimed by many historians as the first war of Indian independence. It may be more appropriate to describe the revolt as the precursor of the Indian National Movement.

Factors which contributed to the growth of National Movement: British interests in India clashed with the interests of the Indian people. The various classes—peasants, artisans, factory workers—had their grievances against British economic policies. The economic and administrative unification of the country and the new modes of communication created a feeling of unity and nationalist sentiments grew. Modern Western education was instrumental in enabling a large number of Indians to develop a modern, rational, secular and democratic outlook. The Press played a crucial role in spreading the message of patriotism and modern economic, social and political ideas. Moreover, the religious and social reformers tried to arouse the self-confidence and self-respect of the people by exhorting them to take pride in the rich cultural heritage of India. The racial arrogance of the European officials and special treatment given to Europeans hurt the sentiments of the people.

By the 1870s, nationalist feelings were simmering below the surface and Lord Lytton's reactionary policies provided the stimulus for them to develop into an organised national movement. During his viceroyalty from 1876-80, most of the import duties on British textile imports were removed, criticism of the government in the newspapers was prohibited through the Vernacular Press Act of 1878, use of arms was prohibited through the Arms Act in the same year, and the age limit for the ICS exam was reduced to 19, thereby virtually barring the Indians from entering the ICS. In 1883 Lord Ripon passed the notorious Ilbert Bill which declared that even the most highly educated among the Indians were unfit to try a European.

These Acts by Lord Lytton and Ripon brought home to the Indians the important realisation that the acceptance of their demands by the government was contingent upon their

success in organising themselves on a national scale. A concrete step in this direction was taken by Allan Octavian Hume whose initiative made it possible for the Indian National Congress to hold its first session at Bombay in 1885 presided over by Womesh Chandra Bonnerjee and attended by 72 delegates. The basic aims of the Congress were to promote friendly relations among nationalist workers, create a feeling of national unity, present popular demands to the government and organise public opinion in the country. Some of the illustrious presidents of the Congress during its early years were Dadabhai Naoroji, Badruddin Tyabji, Ferozeshah Mehta, Surendranath Bannerjee, Ramesh Chandra Dutt and Gopal Krishna Gokhale.

Working of the Congress (1885-1905) moderates: Between 1885 and 1905, the Congress was dominated by moderates who adopted the constitutional method of agitation, characterised by the presentation of petitions to the government. The Indian Councils Act of 1892 provided for indirect election of some members to the Councils. In its early phase the National Congress did not achieve much success.

Growth of militant nationalism (1905-1918): Militant nationalism grew under the leadership of men like Rajnarain Bose and Ashwini Kumar Dutt in Bengal. The most outstanding militant nationalists were Bal Gangadhar Tilak, Bipin Chandra Pal, Aurobindo Ghose and Lajpat Rai. They believed that Indians must work out their own salvation.

In 1905, Lord Curzon partitioned Bengal on administrative grounds. The nationalists saw in this act a sinister attempt to weaken Indian nationalism and therefore launched an anti-partition movement on Aug 17, 1905. The idea of 'swadeshi' and 'boycott' acquired instant popularity. The prominent leaders were arrested in 1908; the movement, however, succeeded as can be seen from the fact that the partition was annulled in 1911.

Moderate-Extremist split: The differences between the two became clear during the anti-partition struggle. The moderates wanted the movement to be confined to Bengal, while the extremists sought its extension to the whole of India. At the Surat Congress session in 1907,

Leadership. Morley-Minto Reforms were introduced by the British in 1909 to placate the moderates; they increased the number of elected members in the Imperial Legislative Council and the Provincial Councils. Meanwhile, communalism reared its ugly head. Sayyid Ahmed Khan played an important role in the emergence of a separatist tendency along communal lines. In 1906, the All India Muslim League was founded under the leadership of Aga Khan.

The outbreak of World War I in 1914 increased the misery of the poorer sections of Indians for whom the war meant heavy taxation. The extremists took advantage of the ineffectiveness of the moderates and two Home Rule Leagues were started in 1915-16, under the leadership of Tilak and Annie Besant. The two leagues demanded self-government for India after the war. Meanwhile, at the Lucknow session of the Congress in 1916, the moderates and extremists united; the Congress and the Muslim League signed the historic Lucknow pact by which they sank their differences and put up a joint political front.

This unity between the various parties aroused political enthusiasm in the country and the British Government, to pacify the nationalists, passed the Montague-Chelmsford Reforms in 1918, by which it promised to give the Indian people a share in the administration. The Congress, however, rejected this.

Gandhi assumes leadership: It was during the agitation against the Rowlatt Act (1919), which authorised the government to imprison any person without trial and conviction in a court of law, that Mahatma Gandhi entered the National Movement. In February 1919, he founded the Satyagraha Sabha and its members had to take a pledge to disobey the Rowlatt Act and court arrest. Thus Gandhiji gave a new turn to politics and the National Movement entered its next phase. There were strikes and demonstrations all over the country. The government tried to suppress the popular movement and in 1919, the Jallianwala Bagh massacre took place. As a result, there was uproar in the country and the Muslim League gave full support to the Congress. The nationalist trend among the Muslims took the form of the Khilafat agitation.

Non-cooperation Movement: In 1920 the Khilafat committee, under the leadership of Maulana Azad, Hakim Ajmal Khan and Hasrat Mohani, launched a non-cooperation movement on Aug 31, 1920. Gandhiji joined it. People were asked to boycott government-run educational institutions, law courts and legislatures. Membership of the Congress was thrown open to the masses. The government took stern action and arrested all leaders except Gandhi. The Chauri Chaura incident (1922), in which without provocation 22 policemen were killed, prompted Gandhiji to suspend the Non-cooperation Movement.

Swaraj Party: There was general dissatisfaction in the country after the suspension of the movement and it was in this atmosphere of disillusionment that Chittaranjan Das and Motilal Nehru formed the Swaraj Party. The party accepted Congress programmes but it decided to participate in the Council elections.

A new left wing appeared in the Congress under the leadership of Jawaharlal Nehru and Subhas Chandra Bose. The year 1928 saw the



Subhas Chandra Bose : Jai Hind.

famous Bardoli Satyagraha under the leadership of Sardar Vallabhbhai Patel, when the peasants organised a 'No Tax Campaign' and won their demands.

Revolutionary terrorism: The terrorists came under the leadership of Chandra Shekhar Azad in 1928 and called their organisation Hindustan Socialist Republican Association. In 1929 Bhagat Singh and B.K. Dutt threw a bomb in the Central Legislative Assembly; they were arrested and Bhagat Singh, Sukhdev and Rajguru were executed.

Simon Commission: In 1927, the government appointed the Indian Statutory Commission, known after the name of its chairman as the Simon Commission, to go into the question of constitutional reforms. Since all its members were Englishmen, it was boycotted. At Lahore a huge procession was organised under the leadership of Lala Lajpat Rai. Police resorted to lathi charge and Lajpat Rai was killed. An important result of the commission was that it united the various parties and in 1928 an All Parties Conference was convened where the Motilal Nehru Committee was appointed to prepare a Constitution for India. However, nothing much was achieved because there was disagreement on the reports of the committee.

Poorna Swaraj: Gandhiji returned to active politics in 1928 and began to consolidate the nationalist ranks. In the Lahore session in 1929, Jawaharlal was elected President, and a resolution was passed declaring Poorna Swaraj as the Congress objective. Jan 26, 1930 was celebrated as the first independence day.

Second Civil Disobedience Movement (1930) was started by Gandhiji on Mar 12, 1930 with the famous Dandi march (salt satyagraha). He was arrested. There were protests and agitations all over the country and in the North-west Frontier Province the 'Red Shirts' movement was organised by Abdul Ghaffar Khan.

Round Table Conferences: The First Round Table Conference, held in London in 1930, was boycotted by the Congress. The government negotiated with Gandhiji and the Gandhi-Irwin pact was signed. Gandhiji went to London as the sole representative of the Congress to attend the Second Round Table Conference which ended in failure. On his return, he was arrested and civil disobedience was resumed. The Third Round Table Conference was held in 1932. The British PM Ramsay MacDonald announced the Communal Award (i.e., separate electorates for Hindus and Muslims). As a protest Gandhiji undertook a fast unto death; consequently, the pro-

Act of 1935 and Congress ministries: The discussions in the Third Round Table Conference led to the passing of the Government of India Act of 1935 (for details see page 33). Though the Congress opposed the Act, it decided to contest the elections and Congress ministries were formed in seven provinces.

Socialist ideas: The 1930s witnessed the growth of socialist ideas. The left wing in the Congress also grew and this was reflected in the election of Jawaharlal as President for 1936 and 1937 and Bose for 1938 and 1939. In 1939, though he was re-elected President of the Congress, opposition by Gandhiji and other leaders compelled Bose to resign. He then founded the Forward Bloc.

In 1939, Congress ministries resigned as a protest against Britain's involvement of India in World War II without consulting the Congress.

Growth of communalism: The Muslim League, led by Mohammed Ali Jinnah, began to spread the cry that the Muslim minority was in danger of being engulfed by the Hindu majority. In 1944, it passed a resolution demanding partition of the country and creation of a state to be called Pakistan after independence.

Cripps Mission and Quit India Resolution: The British Government desperately wanted the active cooperation of Indians in the war effort. To secure this cooperation it sent a mission to India in March 1942, headed by Sir Stafford Cripps. The mission was a failure and the All India Congress Committee, at its meeting in Bombay on Aug 8, 1942, passed the famous Quit India Resolution and proposed to launch a non-violent mass struggle under Gandhiji's leadership to achieve its aim. On Aug 9, Gandhiji and other leaders were arrested, the Congress was declared illegal, there were protest movements everywhere, the government took stern measures and succeeded in crushing the movements. After the suppression of this revolt, there was a lull in the political activity till 1945. Bose formed the Indian National Army (INA) to conduct a military campaign for the liberation of India.

Last phase of the Freedom Movement (1945-47): The resistance by the INA collapsed by the end of World War II. There were massive movements against the trial of the soldiers and officers of the INA and the people succeeded in getting the prisoners released. During 1945-46, there were numerous agitations and demonstrations all over the country. In March 1946 the Cabinet Mission came to India to negotiate with the Congress leaders about transfer of power. In July, when elections for the Constituent Assembly were held, the Congress bagged most of the seats; the Muslim League boycotted the Constituent Assembly and on Aug 16, 1946, observed Direct Action Day to achieve Pakistan. In September 1946, an interim government, headed by Jawaharlal was formed. The Muslim League joined it later.

Lord Mountbatten, who came to India as Viceroy in 1947, formulated a plan for India's freedom. The country was partitioned and the new state of Pakistan was created along with a free India. On Jun 3, 1947, the British Parliament passed the Indian Independence Act of 1947. It proposed the establishment of two dominions of India and Pakistan. Thus on Aug 15, 1947, the British authority in India came to an end, and India achieved independence. ■

The Quarterly Review

(October–December '84)

INDIA

PEOPLE

Antulay, A.R.: Former Maharashtra CM, expelled from Congress(I) for his anti-party activities and for forming a regional party, Indiravadi Maharashtra Congress Party. He contested the VII Lok Sabha poll as an independent from the Kulaba constituency and lost.

Bachchan, Amitabh: Elected to the Lok Sabha from Allahabad, defeating H.N. Bahuguna of DMKP. This is Bahuguna's first election defeat.

Bali, Vyjanthimala: The star-turned-politician, elected from the south Madras constituency, defeating the Janata candidate, Era Chezhyan.

Bedi, Rajinder Singh: Noted Urdu author and Hindi film-maker, died of cancer on Nov 11. He won the Padma Shri for his contribution to Indian literature.

Berari, H.A.: Additional Director in Intelligence Bureau (IB), appointed Director IB, succeeding R.K. Kapoor who was in charge of the late PM's security.

Bhargava, Dr Sneha: Head of the Department of Radio-diagnosis at the AIIMS, took over from Prof H.D. Tandon as Director of the institute.

Borker, Vasant Pandurang: Prominent freedom fighter and social worker, died on Oct 31 in Bangalore.

Captain, Ayesha: India's first woman jockey, she comes from a family of riders.

Chandrasekhar: President of Janata Party, defeated in the Lok Sabha poll from the Ballia constituency in UP by the Congress(I) candidate Jagannath Chaudhary.

Chevan, Y.B.: Veteran freedom fighter and former Dy PM, died on Nov 26 in New Delhi. A former CM of Maharashtra and Defence Minister in the Nehru Cabinet, he also held important portfolios in the Cabinets of Lal Bahadur Shastri and Mrs Gandhi.

Chellaney, Brahma: AP correspondent against whom the Punjab Government filed an affidavit in the Supreme Court (SC) seeking his arrest for his failure to disclose the various military, police and medical sources that gave him information on the army action in the Golden Temple complex.

Chowdhury, A.B.A. Ghani Khan: Congress (I) candidate elected from West Bengal's Malda constituency, dropped from Rajiv Gandhi's

Cabinet.

Dharanvir: Former Union Minister of State for Labour and Rehabilitation, died on Dec 22 in New Delhi's AIIMS where he lay in coma for 10 days following cerebral haemorrhage. He was a veteran Congressman and a social worker.

Dhote, J.L.: Better known as the 'toothless lion of Vidarbha', expelled from the Congress(I) for his anti-party activities. He has floated a new party, Krantikari Congress.

Dutt, Sunil: The Congress(I) actor-turned-politician defeated Ram Jethmalani, a high profile lawyer and Vice-President of the BJP in the Lok Sabha poll from north-west Bombay.

Fernandes, Oscar: The aggressive Congress (I) MP, re-elected from the Udupi constituency in Karnataka after defeating his nearest rival K.S. Hegde (BJP). He was inducted as one of the joint secretaries to Rajiv when the latter became AICC (I) General Secretary.

Forman, Carl Gustaf: Transport and Equipment Management Officer in the UNICEF regional office, Delhi, died in an accident near Almora on Oct 30 while taking part in the Himalayan Car Rally.

Fotedar, Makhn Lal: Political secretary to Rajiv in the latter's capacity as AICC(I) President.

Gandhi, Menaka: President of Rashtriya Sanjay Manch (RSM), lost her deposit after she was defeated by Rajiv at Amethi, in the elections.

Ganesan, Sivaji: Veteran Tamil film star-turned-politician who had resigned from the Congress(I), withdrew his resignation.

Gupta, Satyendra Kumar: Chief editor of

Aaj, a Hindi daily, died on Nov 6.

Gupta, Capt S.K.: A fighter pilot, took over the command of INS Vikrant from Capt K.A.S.Z. Raju, on Nov 20.

Hegde, Ramakrishna: Resigned from chief-ministership of Karnataka following Janata Party's near-total rout in the Lok Sabha elections. But continues to head a caretaker government on the insistence of Governor A.N. Banerjee till the commencement of Assembly elections in early March.

Hillary, Sir Edmund: The Everest hero has been made New Zealand's High Commissioner to India. He will be concurrently accredited to Bangladesh, Bhutan and Nepal.

Iyengar, Rajagopal: A former SC judge and Chairman of the Press Council of India, died on Nov 8.

Iyer, V.S. Krishna: Won the south Bangalore seat as a Janata Party candidate.

Jog, Suryakant S.: Special IGP (administration), Maharashtra, who earned high commendation for organising security during Asiad '82, appointed Commissioner of Delhi Police succeeding Subhash Tandon.

Kao, Ram Nath: Former Security Advisor to late PM Mrs Gandhi and Director of the Research and Analysis Wing (RAW), appointed Member of the Policy Planning Committee of the External Affairs Ministry.

Kapur, Air Vice Marshal H.L.: Nominated to the Rajya Sabha through a presidential notification issued on Dec 30. For the first time a retired service officer has been nominated to the Rajya Sabha.

Kaul, M.N.: A veteran parliamentarian and former Secretary Lok Sabha, died on Nov 20.

Khan, Aslam Sher: Former Olympian and hockey player, elected from Betul, MP.

Khan, F.M.: Karnataka Congress(I) leader, who was sacked from the party recently, demanded a referendum be held among the people of India, Pakistan and Bangladesh for amalgamation of their countries into one sovereign nation.

Kidwai, Mohaina: Congress (I) candidate, elected from Meerut constituency.

Kumar, Prem: Special Secretary in the Union Home Ministry and a former Secretary in the Cabinet Secretariat, appointed Union Home Secretary succeeding M.M.K. Wali who replaces P.S. Gavai as Lt Governor of Delhi.

Lal, Bansi: Former Defence Minister and Haryana CM, elected from Bhiwani. He is now Union Minister for Railways.

Laldenga: Self-styled leader of the underground Mizo National Front (MNF), arrived in India in late October for negotiations with the

Laldenga: Exhilaration in anticipation.



political settlement in Mizoram for over two decades.

Mahindra, Keshub: Chairman of the Union Carbide pesticide plant in India and V.P. Goldsela, Managing Director, were both arrested along with Warren Anderson, Chairman of the Corporation in the U.S. as soon as they reached Bhopal on Dec 7 after the deadly gas-leak from their Bhopal plant which killed over 2,000 people and rendered over 20,000 sick from the after-effects of gas inhalation.

Mani, K.M.: Kerala's Finance Minister, who has the distinction of presenting no less than six budgets over a period of eight years, recently presented a white paper on the economic problems of the state and ways of solving them. Mani blamed the Centre for Kerala's deficits and called for structural changes in the division of financial resources between the Centre and the states.

Mehra, Ashok: I-sted economist and former Union Minister, died on Dec 10. He was an active trade unionist and the first General Secretary of the Hind Mazdoor Sabha.

Mukherjee, Pranab: Finance Minister in Mrs Gandhi's government, dropped from the Rajiv Cabinet.

Nair, Govindan: Veteran CPI leader, died in Trivandrum on Nov 27 following a heart attack.

Narayanan, K.R.: Former Ambassador to the U.S. successfully contested from the Ottapalem constituency. He is now Minister of State for Planning.

Nazareth, Daniel: Bombay-born conductor of the famous Berlin Symphony Orchestra, was in India to conduct Rossini's 'Barber Of Seville', an Italian opera.

Nehru, Arun: AICC(I) General Secretary, elected from Rae Bareilly by a margin of 2,57,553 votes, in a multi-cornered contest. He is now Minister of State for Power.

Norris, Percy: British Deputy High Commissioner in Bombay, killed by a hail of bullets in November en route to his office in Flora Fountain. A group calling itself Revolutionary Organisation of Socialist Muslims claimed responsibility for this heinous act.

Pandey, Ramchandra: Leader of the Sikdim Congress (Revolutionary) Party merges his party with Congress(I).

Pant, K.C.: Former Lok Sabha MP, elected from the New Delhi constituency defeating Kanwar Lal Gupta of the BJP. He is now Union Minister of Education.

Patel, Ahmed Mohammed: Congress(I) MP, appointed Parliamentary secretary.

Patidar, Shyam Sunder: MP Labour Minister, resigned on Dec 28, accepting moral responsibility for the Bhopal gas tragedy.

Patnaik, Biju: Janata Party leader and former Union Minister, elected from the prestigious Kendrapara constituency, Orissa, defeating his nearest Congress(I) rival, Bhagbat Prasad Mohanty, by a margin of 16,776 votes.

Pawar, Sharad: Former Congress(S) CM of Maharashtra, captured two seats breaking new ground in Marathwada and Vidarbha regions. He polled the highest number of votes (361,618) in the state wresting the Baramati seat from sitting Congress(I) member, S.B. Patil.

Pitroda, Satyan: A Gujarati American, who is developing a modern electronic switching system (the hardware inside a telephone exchange) at the newly formed Centre for Development of Telematics (CDOT). This is expected to come up



MGR: Healthy homecoming?

in three years time with the promise of a better telephone service in India.

Ram, Jagjivan: Former Union Defence Minister and leader of Congress(J) Party, elected from Sasaram, Bihar by a narrow margin.

Ramachandran, M.G.: Re-elected CM of Tamil Nadu in the Assembly elections held along with the general elections.

Ramanathan, Prof R.K.: World renowned scientist and one of the founders of the reputed Physical Research Laboratory, died in Ahmedabad on Dec 31.

Rao, Prof U.R.: Appointed Secretary, Space Department and Chairman, Space Commission, succeeding Prof Satish Dhawan.

Rawat, Lt Gen G.S.: Vice Chief of the Army Staff, retired on Dec 30 after 37 years of service in the Indian Army.

Rehman: Veteran character actor on the Hindi screen, died on Nov 5 of throat cancer.

Scindia, Madhavrao: Ex-Maharaja of Gwalior and Congress(I) candidate, defeated Atal Behari Vajpayee (BJP) in Gwalior by a majority of 1.75 lakh votes, the highest in the state. He is now the Minister of State for Railways.

Shukla, Madan Lal: Former MP and senior BJP leader, died in Bilaspur on Dec 30.

Shukla, Vidya Charan: Congress(I) MP and Chairman of Society of National Physical Education and Sports, elected President of the Indian Olympics Association on Oct 28.

Sikarwar, Ramesh: Most dreaded and wanted dacoit of MP, surrendered voluntarily.

Singh, Arun: Rajiv's Doon School friend and political secretary, appointed Parliamentary Secretary.

Singh, Charan: DMK leader elected from Baghat constituency, defeating his nearest rival Mahesh Chand of Congress(I).

Singh, Kanwar Nathwar: Former Foreign Secretary, elected from Bharatpur, Rajasthan. He is now Minister of State for Steel.

Swaminathan, Srijata: A firebrand Delhi stage actress-turned-social worker. Srijata had a job with the National School of Drama but took to freelancing. She was gradually involved as a

freelancer. She was also helped people in getting their winteram wages. Today she lives in Gantail in the Barwara district of Rajasthan and organises the tribals to fight for their rights.

Talibani, Admiral R.H.: Took over as Chief of the Naval Staff from Admiral O.S. Dawson on Nov 30.

Tajmud Islam, Sheikh: Militant leader of the radical Islami Jamiat-e-Tulba (IJ) of J & K, wanted in a number of sedition cases, escaped from the country with a forged passport. He is believed to have fled to a 'Muslim' country in mid-October.

Tata, J.R.D.: Chairman of the Jamshedpur TISCO, succeeded by TISCO Vice-Chairman and Managing Director, **Russi Mody.**

Thakkar, M.P.: A senior SC judge, appointed to head the judicial commission to probe the assassination of the late PM, Indira Gandhi. The one-man commission was appointed under the 1956 Commission of Inquiry Act. A special investigating team has also been appointed under S. Anand Ram, Director-General of the Central Industrial Security Force (CISF). The team will include a senior superintendent of police of the CBI and a number of top sleuths in the country.

Thuhawama, Lal: Mizoram Pradesh Congress(I) President, declared elected uncontested from the Union territory of Mizoram.

Tehra G.S.: Elected President of the Shiromani Gurdwara Prabhandak Committee for the 14th time in succession.

Verma, Prem: Veteran journalist and a former Congress MP, battered to death by intruders in his house in Delhi.

Viswanathan, S.: Chairman and Managing Director, Enfield India, is confident that the Madras-based company would benefit from an industrial closure of the collaborating firm Zundapp Werke Ltd in Munich.

PLACES

Andhra Pradesh, Telangan: The festival of flowers to be held on Oct 2 to worship the Goddess of Life was marred by the fact that Andhra Pradesh was trapped by an unrelenting drought.

Bihar: North Bihar, stretching from Champaran district or the Indo-Nepal border to Katihar on the state border with West Bengal, was extensively damaged by floods. A population of 15m were affected.

Chandigarh: Punjab Government and the administration of the Union territory of Chandigarh imposed Press censorship on Nov 1, following reports of large-scale disturbances in Delhi and other parts of India, after the assassination of Mrs Gandhi.

Gujarat, Baroda: One of the two units of the Tarapur Atomic Power Station (TAPS) was shut down on Nov 10 following technical snags in the reactor. **Megadhi:** The town was the scene of murder and lawlessness in the first week of October. The cause was the bitter relationship between the Kshatriyas and Patels. The Kshatriyas, earlier rulers of 200 and odd princely states, were showing their resentment after they lost their land with the implementation of land reforms in the state. They became drivers and constables whereas the Patels, the present victims who constitute 22% of the population, had branched out as businessmen. **Boda**

Madhya Pradesh, Bhopal: It has come under a unique rural electrification scheme with the installation of 13 solar-powered electric streetlights. The special lamp posts have photo-voltaic cells which catch the sunlight and convert the solar energy into electrical energy.

Haryana, Sirsa: Cotton crops in the district standing in hundreds of acres of land have been hit by a mysterious disease.

Karnataka, Bangalore: The first seminar of the Mahila Congress, the largest gathering ever of women (2,50,000 delegates) in Bangalore, proved to be a big farce. Burning problems facing women were ignored in favour of seminars on 'unity, integration and world peace'. • An agitated mob of loan seekers in the city thronged many of the 464 banks threatening and abusing bank officials, damaging vehicles and even forcing the officials to pull down their shutters, because the then Union Deputy Finance Minister, Janardhan Poojary's controversial bank loan scheme for the economically weak had misfired, leaving the genuine loan-seekers in the lurch.

• **Vidharaj**, the world's most priceless gem, is now with a Bangalore advocate G. Vidyaraj. He claims that the star ruby is bigger than the 138.72-carat gem—till now considered the biggest.

Madhya Pradesh, Bhopal: The night of Dec 2, was fatal for over 2,000 people in the state capital, when they were choked to death by leakage of MIC from the Union Carbide pesticide plant.

Madu: One of the prime tourist spots in the country, has turned into a killing ground. A man-eater strolls the area killing villagers. **Talcher:** The Talcher Heavy Water Plant of the Department of Atomic Energy, produced heavy water for the first time on Oct 24 after engineers had modified its earlier design which was defective.

Maharashtra, Amravati district: The 37-year-old rehabilitation complex for leprosy patients in Tapovan, one of the finest and most comprehensive of its kind, was closed down in October. Dr Shivaji Ganesh Patwardhan, its 92-year-old founder, went on a hunger strike because of lack of money to finance the institution. **Bombay:** In a unique scheme to resettle 6,000 families, the CM, Vasantdada Patil, handed over 64 acres of government land to the Nagree Nivara Parishad (NNP) in October. The parishad was prompted by fiery opposition leader Mrinalini Gore and her colleagues P.B. Samant and Kamal Desai, to ask for the land. • **BEST** (Bombay Electric Supply and Transport), considered the lifeline of the metropolis, went on an indefinite strike on Oct 19, over 30,000 workers have struck work. The strike came close on the heels of the savage fare hike (twice in less than a year).

New Delhi: Mrs Gandhi was assassinated on Oct 31 by two of her own security guards, Satwant Singh and Beant Singh. The army was called out on Nov 2 in the Union territory of Delhi as the wave of violence triggered off by the assassination continued, unabated. Over 759 were reported killed. Shoot-at-sight orders were issued to maintain law and order and curfew was also imposed. • **Appu Ghar**, a children's amusement park, built on the Disneyland pattern, was inaugurated by Rajiv on Nov 19. • The capital's Wellington Crescent was renamed 'Indira Gandhi Marg' as a tribute to late Mrs Gandhi.

Punjab, Amritsar: President Zail Singh visited the Golden Temple after the repair work

was completed and the place was free of the wreckage and debris caused by the army action. • The Centre finally restored the keys of all buildings in the Golden Temple complex to the SGPC on Oct 9. • About 300 persons from various parts of the country converged here on Nov 11 to attend a joint meeting to study the situation in the country following Mrs Gandhi's assassination.

Rajasthan, Jaipur: Two more power projects which will generate 473 lakh units annually were approved by the Central electricity authority.

Sikkim: Congress(I) was defeated in the VIII general elections. Former CM, Nav Bahadur Bhendari wrested the lone Lok Sabha seat from the Congress(I).

Tamil Nadu, Chengleput district: It was heavily devastated by a cyclone which hit the Pondicherry coast in the first week of November.

Kalpakkam: The Centre has yielded to the state's long-standing demand for exclusive rights to the power from the Madras Atomic Power Projects first stage plant (MAPP-1) at Kalpakkam which went commercial this year. **Medhurantakam:**

This constituency had the highest number of 90 candidates contesting elections to the Lok Sabha. **Madras:** A four-year old bank loan scandal involving city branches of no less than 14 nationalised banks was finally exposed when an official complaint was lodged with SP (Special branch) that two of its city branches had been duped into giving Rs 12 lakhs by way of loans for purchase of eight second-hand lorries. • The Readymoney Shopper's Club in the city—the middle-class answer to the credit card schemes for the affluent, like the Diner's Club—has apparently fared very well in its first year of operation. At the club's board meeting on Oct 26 it was revealed that the total turnover from its 15,000 members, had crossed Rs 1 crore. **Neyveli:** The Neyveli Lignite Corporation (NLC) is likely to double production of lignite and power, now that the work on the second mine-cut of the corporation is complete. Unusually the project has been completed long before schedule.

UP, Ayodhya: A 'liberation march' or *dharma yatra* from Sitamarhi (Bihar) to Lucknow (UP), organised by the Shri Ram Janambhumi Mukti Samiti, reached Ayodhya on Oct 7 where about 60,000 devotees gathered to take an oath to 'liberate' the disputed shrine called Babri Masjid, which the Hindus believe to be the birth-place of Lord Rama. **Dehra Dun:** Dec 21 was unique for the Generals who passed out from the IMA, Dehra Dun on Dec 21, 1947, as young commissioned officers—the first batch in independent India. The occasion was the second get together of the 'Second Course' officers commissioned from the IMA. Twelve of the second course officers have risen to the high rank of Lieutenant Generals. Eight of them are still serving the army. **Dev Prayag:** A 14-day white water expedition over Uttar Ganga was organised from Dec 1 by a group of 90 adventurers led by the Indian adventure sports promoter Avinash Kohli and the world famous river runner Ken Warren. For the first time women mountaineers, Chandra Prabha Artwal and Alike, also went on the expedition over the roaring currents of the Alakananda and the Bhagirathi starting from Dev Prayag.

West Bengal, Calcutta: A unique 14-year-old institution called the Beggars Research Bureau in Calcutta has been collecting data on beggars in the city. The bureau reveals that 70% of the beggars researched are workers retrenched

from factories, mills and other establishments who were driven to begging when they lost their jobs. **Jaldapara:** The Wildlife sanctuary here, the only major preserve of the great Indian rhinoceros, is left with just 22 rhinos. Rhino horn hunters and encroachers are responsible for reducing the number which was 72 only two decades ago. **Jalpaiguri district:** A quiet revolution is taking place here with the formation of the Singherita Adivasi Jantha Khaman Society (SAJKS), the country's first tribal commune. With the help of the society, the 20-odd Santhal families of the village are beginning life anew.

AWARDS

Ananda Puroshkar, the prestigious award for literary excellence to the noted Bengali litterateur, Dibyendu Palit. The award carries a cash prize of Rs 10,000.

Meghnad Saha Medal for 1984 to Dr Raja Ramanna for his significant contribution to Nuclear Physics. Ramanna, Chairman of the Atomic Energy Commission, is the tenth recipient of the award instituted by the Indian National Science Academy (INSA).

Indira Priyadarshini Award to Hindi poet and critic Shrikant Verma for promoting the programmes and ideals of late Mrs Gandhi.

UP Lalit Kala Akademi Awards of Rs 10,000, to Rameshwar Singh of Udaipur, Sharad Pande of Lucknow and Vidya Sagar of Jaipur for printing; Srihande of Lucknow for sculpture; and Vijai Singh of Varanasi for drawing.

Jawaharlal Nehru Award for International Understanding posthumously to Indira Gandhi. The Rs 2.5 lakh annual prize, instituted in 1964 by the Indian Council of Cultural Relations (ICCR), is given for outstanding contribution to international understanding, goodwill and friendship among the peoples of the world.

National Family Welfare Awards of 1983-84 to Maharashtra, Punjab, Assam, HP and Pondicherry. The prizes were awarded for excellence in performance in the field of family planning.

Krishnan Gold Medal for 1984 to B.H. Briz Kishore, visiting scientist at the Jawaharlal Nehru Technological University, for his contribution in the field of geo-hydrological modelling. The award was instituted by the Indian Geophysical Union (IGU) in 1964, to be awarded to eminent scientists in the field of earth sciences.

EVENTS

ELECTIONS '84

The untimely death of Mrs Gandhi generated controversy over the holding of elections—initially expected to be held in January '85. And quite contrary to expectations her successor Rajiv Gandhi preponed the elections; the dates announced were Dec 24, 27 and 28, 1984. This upholding of democratic values by Rajiv, a young, relatively inexperienced entrant into the political arena, laid to rest the people's fear of a dictatorial or dynastic rule.

What followed the announcement of the polls was almost a month of public wooing by the political parties. Election manifestos were released, promises were made, pressure was exerted. An electorate of 378m was once again going to the polls to exercise its

—chaotic as never before. Mrs Gandhi's assassination and its violent aftermath coupled with the Bhopal gas tragedy—an avertable mammoth catastrophe—had left the people reeling from their destructive effects. But in the midst of the troubled atmosphere too, Indian democracy exhibited remarkable strength to weather all storms.

The elections were held and went off smoothly despite aberrations caused by booth-rigging, boothcapturing and sporadic violence. They resulted in a Congress(I) win never before witnessed in the history of independent India. Bagging 401 of the 508 seats contested the ruling party surpassed its earlier best of 371 seats in the Nehru regime. The few exceptions of the Congress(I) rule were the states of Andhra Pradesh, West Bengal, and J & K where regional opposition parties namely the Telugu Desam, Communist Party of India (Marxist) and the National Conference(F) stemmed the countrywide sweep made by the ruling party. In fact the Telugu Desam emerged as a major Opposition force which is surprising in the light of the fact that there are quite a few national opposition parties on the scene as well. And thanks to the internal bickering in the Opposition ranks, the country has a virtually unopposed Congress(I) rule at the helm.

The state-wise break up of the contested seats is as follows. The Congress(I) swept through the states of Rajasthan, Haryana and Madhya Pradesh winning all 25, 10 and 39 seats respectively. In Maharashtra it secured 43 of the 48 seats contested while the remaining 5 were divided between Congress(S)—2, Janata—1, Peasants and Workers Party (PWP)—1 and Independents—1. In Karnataka the once popular Janata Party could retain only 4 of the 28 seats while the Congress(I) secured 24. In Kerala there was a CPM ouster—the party could manage only 1 of the 20 seats. The ruling party bagged 13 and the remaining 6 were shared among the Indian Union Muslim League (IUM)—2, Congress(S)—1, Janata—1 and Kerala Congress(J)—2. In Tamil Nadu, the Congress(I) won 25 of the 38 seats contested while the AIADMK and DMK won 12 and 1 respectively.

In the Hindi belt comprising UP and Bihar the Congress(I) tide continued unabated with 82 of the 84 seats contested in UP and 48 of the 52 seats contested in Bihar going in its favour. The remaining 2 seats in UP went to the DMKP while in Bihar the CPI won 2, and the DMKP, Janata, Congress(J) and Independents 1 each. In Himachal the Congress(I) won 3 out of 4 contested seats. The eastern belt also displayed the Congress(I) swing with Meghalaya, Arunachal, Nagaland, Manipur and Mizoram handing it over the 2, 2, 1, 2 and 1 seats contested. Twenty of the 21 seats contested in Orissa went in favour of the ruling party. However, in Andhra Pradesh the NTR led Telugu Desam won convincingly by winning 28 of the 40 seats contested with the Congress(I) bagging only 6 and Janata, Congress(S), CPM, CPI and Independents securing one each. In West Bengal the Congress(I) lost to the CPM where the former won 16 and the latter 18 of the 42 seats. CPI and RSP obtained 3 each and Forward Bloc 2. The Farooq Abdullah-led National Conference(F) beat the Congress(I) winning 3 of the 5 contested seats with Con-



Give us a hand: Rajiv and his jubilant colleagues in a victory line-up.

gress(I) bagging the remaining 2. Sikkim and Tripura were also unaffected by the Congress(I) wave, the lone seat in Sikkim going to SGSP and the two contested seats in Tripura going to CPM. But except for Dadra and Nagar Haveli where Independents won the 1 contested seat, the Union territories went for the ruling party in a big way too. In Delhi the Congress(I) achieved a grand slam of all 7 seats, while it won the sole contested seats in Pondicherry, Lakshadweep, Chandigarh, Andaman and Nicobar Islands and the 2 seats from Goa as well.

The new PM, Rajiv Gandhi, polled 83.6% of the votes polled in Amethi—by far the highest by any prime minister. And he, along with his new Cabinet, will steer the country on.

CATASTROPHES '84

Nineteen eighty-four did prove to be an Orwellian year. The traumatic events that swept the nation, particularly in the last quarter, were catastrophic, and the country was engulfed by a strong sense of insecurity.

Mrs Gandhi's Assassination

On Oct 31, Indian history took a turn when Mrs Gandhi the country's PM for 16 years was brutally assassinated by two of her own security guards. Infuriated by her violent death, the people set the nation on a blitz wrath. Violence on an unprecedented scale was unleashed throughout the country. Caught in the grip of this unreasoning frenzied madness the masses vent their anger primarily on the Sikh community. It was the partition days of 1947—action replayed!

The riots continued for over three days. The northern belt, particularly Delhi's resettlement colonies were the worst affected. The death toll in the entire country went up to around 1,500 with Delhi alone accounting for above 500 deaths. To control the mammoth orgy of violence CRPF and army troops had to be deployed. Shoot-at-sight orders were issued and curfew imposed in riot affected areas.

Rescue operations were carried out and the affected and homeless brought to relief camps.

All communities and groups actively helped the Centre in relief work. Compensation was announced to those affected. Insurance companies were asked to settle claims and also process those claims which covered riot risk. But, unfortunately, only few could benefit from the compensatory measures as the amount offered was far too less and bureaucratic procedures delayed implementation of the financial relief measures. The magnitude of losses in these riots is likely to run into crores.

The Centre appointed a senior judge of the Supreme Court M.P. Thakkar to investigate the events and circumstances of the assassination. S. Anand Ram, Director-General of the Central Industrial Security Force was also appointed to lead an investigation into the assassination. It was clarified that there would be no duplication in their work.

Bhopal Gas Tragedy

Bhopal witnessed the worst ever industrial accident in world history when the mild winter evening of Dec 2-3 was converted into a nightmare of misery, pain, panic and death for thousands who inhaled methy-iso-cyanate (MIC), a poisonous liquid gas that leaked out from a storage tank in the Union Carbide's pesticide plant.

The tragedy occurred soon after 1 a.m. when pressure built up in a 45 tonne capacity gas chamber causing the leakage of MIC choking and nauseating thousands of hapless individuals who were in deep slumber. Woken up by a burning sensation in their eyes and an uncontrollable fit of coughing and dizziness they fled in desperation to unpolluted neighbouring towns. The unlucky ones were suffocated to death even as they slept while others fell unconscious on roads as the gas, haste and cold took its toll. Hospitals overflowed with people clamouring for medical attention. The Hamida hospital compound was littered with hundreds of bodies. The actual magnitude of the tragedy unfolded the next morning when all hospitals and private clinics were overflowing with patients and the number of victims was alarmingly on the increase.

Madhya Pradesh CM, Arjun Singh immediately ordered a judicial inquiry to ascertain the causes of the tragedy and five officials of the Union Carbide including the works manager

management. The PM issued a grant of Rs 40 lakhs from the Prime Minister's Relief Fund and announced a decision to reconsider the policy of allowing factories producing such dangerous items to be located in the midst of a vast populace. Though relief operations were undertaken on a mass scale, there was a steady exodus from the city.

The immediate closure of the factory was ordered and as a precautionary measure its counterpart in West Virginia was also closed down.

Union Carbide top brass including Warren Anderson, Chairman of Union Carbide in the US, Keshub Mahindra, Chairman of the Corporation in India and V.P. Gokhale, Managing Director were arrested. Anderson was however bailed out the same day. He later revealed at a Press conference that an expert team, which had visited the Bhopal plant in June 1982, had reported that the plant was unsafe because of lack of implementation of safety measures. Yet, despite being warned about this both by the experts' report and the accidents which had occurred over the past few years, the Union Carbide turned a deaf ear to these and let things continue as they were. Numerous law suits worth several billions of dollars have been filed against Union Carbide. To ensure the future safety of the people all the remaining gas from MIC tanks was neutralised by a process termed 'Operation Faith'. Elaborate precautionary and safety measures were taken to prevent any further catastrophe, but death and disease had so shattered the confidence of the people that the mere announcement of launching 'Operation Faith' had them fleeing the town. The operation was set in motion on Dec 16 and was completed within three to four days.

Cyclonic Ravages

In November '83 nature went berserk, and one of the most furious cyclones of recent times, blazed a trail of destruction in coastal areas of Tamil Nadu and Andhra Pradesh. Moving from Chingleput and South Arcot in Tamil Nadu the storm moved towards Nellore in Andhra Pradesh ripping through the small towns of Sullurpet, Tada, and Sriharikota. The affected areas were cut off from other parts of the country and almost all channels of communication snapped. Large areas were submerged under sheets of water.

The magnitude of damage was estimated to be very high. Even in Madras city, where people had been forewarned, thousands were rendered homeless. Port operations in the state capital were suspended and transformers and low tension feeders damaged, thus badly hitting the power supply.

In Andhra Pradesh this was the worst disaster after the 1977 cyclone. Around 800 villages were marooned and Nellore and talukas of Chittoor District badly affected by torrential rains. The space station at Sriharikota was also damaged.

The Andhra CM promised to implement relief measures on a war footing and to provide ex-gratia compensation of Rs 2,000 to the relatives of those killed. The PM also announced a relief of Rs 15 lakhs from the Prime Minister's Relief Fund and sanctioned Rs 7



crores to Andhra and Rs 5 crores to Tamil Nadu as 'ways and means advance' for relief operations.

SOUTHERN STATES Tamil Nadu

The Tamil Nadu Government faced an uncertain future following M.G. Ramchandran's illness. The charismatic AIADMK CM was in a critical state suffering from kidney and heart trouble, and asthma. He later lapsed into a coma following a paralytic stroke. Till as long as possible, his health report was kept a closely guarded secret mainly on his own insistence. It was only a fortnight after his admission to the Apollo Hospital in Madras that doctors held out hope of his recovery. Later, he was shifted to the Downtown University hospital in Brooklyn, USA.

Meanwhile, the AIADMK was riven with dissensions, throwing the party cadre into confusion. With the Lok Sabha polls round the corner the AIADMK, jittery in the absence of its popular leader, was relying heavily on the sympathy factor. Its electoral ally, the Congress(I), was hoping to make a dent in Tamil Nadu after a long time, in the wake of Mrs Gandhi's assassination. The state Finance Minister, V.R. Nedunchezhyan, after a lot of wrangling, installed himself as the de facto CM in a fierce succession battle. A calculated risk was taken when the state government recommended the Governor, S.L. Khurana, to dissolve the state Assembly. This was said to be in keeping with MGR's wish to have simultaneous elections to the Parliament and the state Assembly 'to save time, cost and effort'. Despite the internal power struggle and AIADMK's inability to throw up a strong personality, the AIADMK-Congress(I) combine swept the polls, wiping out the Opposition completely. The AIADMK won 133 seats in the 232-member state Assembly and the Congress(I) won 62 of the 72 seats it contested.

The massive mandate, ironically, led to greater instability and discord in the state. The issue of the formation of government has become vexatious adding to the people's anxiety. Since none of the contenders—Nedunchezhyan, Jayalalitha, Veerappan—were acceptable to all the party members, to prevent internal split, it was decided to elect

Ashes to ashes: Nature's fury on coastal Andhra in the form of a severe cyclone.

unanimously the ailing MGR as the leader. It was suggested that the Governor could fly to Brooklyn to administer the oath of office to MGR. However, Khurana made known his disinclination to make the trip—mainly to avoid setting a bad precedent. He instead suggested that an interim CM be elected by the AIADMK so that MGR could take over when he is in a position to do so. The situation is ticklish, with the political party desperately trying to keep itself intact by clinging to the apron strings of an ailing leader, and in the process destroying the established convention of a new government taking over immediately after Assembly polls. Now everything depends on the Governor—whether he waits for the ailing MGR to give Tamil Nadu a government or swears in another AIADMK functionary as CM.

Andhra Pradesh

It became imperative for N.T. Rama Rao to regain legitimacy after the Bhaskara Rao episode. Riding on the crest of the sympathy wave NTR, on Nov 22, recommended the Governor to dissolve the state Assembly on grounds of 'cleaning public life' and strengthening democratic principles to protect the interests of the people. This was the first instance of a CM recommending dissolution with more than half his term remaining. His caretaker government, however, pressed that the elections be held in the first week of March '85, following the Lok Sabha polls. After much dilly dallying the Centre agreed. Then came the general elections with the verdict going strongly in favour of the Telugu Desam. Indeed, Andhra remains the only Opposition bastion and Telugu Desam the single largest opposition party in the Congress(I)-dominated Parliament. So strong was the pro-NTR wave that it successfully submerged the charisma of Rajiv Gandhi and routed some Congress(I) stalwarts and former ministers like Health Minister Shiv Shankar and Home Minister Narasimha Rao.

Karnataka

The announcement of Lok Sabha elections after Mrs Gandhi's assassination witnessed a flurry of activity in the Janata camp in Kar-

ment in the country depended on its success in capturing a majority of the 28 parliamentary seats. In an attempt to consolidate its hold the Janata Party threw into the election fray some of its state ministers. The party could, however, win just 4 seats while the Congress(I) captured 24. Following this drubbing at the polls state CM, Ramakrishna Hegde decided to make a dignified exit and sent in his resignation on Dec 29 to the Governor recommending immediate dissolution of the state Assembly. Instead of imposing President's rule Hegde was asked to continue as head of the caretaker government till March '85. Though initially reluctant the Karnataka stalwart accepted the responsibility. The elections for the state Assembly have been announced for Mar 2 and 5.

TROUBLED STATES

Punjab

For Punjab the last quarter of '84 has been one of fluctuating fortunes. On Oct 9 the government removed the last overt signs of the battle that had been waged in the precincts of the Golden Temple complex by withdrawing troops from the Guru Nanak Niwas, Guru Ram Das Sarai, Teja Singh Samundri Hall and the *langar* building. The entire Golden Temple complex was thus formally restored to the SGPC. This overture by the Centre was promptly followed by miscreant misbehaviour in the freed buildings. Sporadic violence too continued to hamper restoration of peace and keeping these factors in mind the government decided against restoring popular government rule in the state and the Punjab Government decided to extend the National Security Act within the state for another three months with effect from Nov 4. So far at least 450 people have been apprehended under this Act.

Meanwhile in the top echelons of the Sikh leadership there appeared signs of discontent. The five Sikh head priests dissolved the Akali Dal ad hoc committee headed by Prakash Singh Majitha and replaced it with a new one headed by Surjan Singh Thekadar. The SGPC then proceeded to hold elections for its office bearers re-electing Gurcharan Singh Tohra as President for the thirteenth consecutive time.

And even as a solution to the Punjab problem continued to elude the Centre, events took a drastic turn for the worse. The assassination of Mrs Gandhi proved to be the final straw. The masses unleashed their fury on the Sikhs and hundreds became victims of a furious, senseless violence. But what was heartening even in the ensuing moments of calamity was the fact that Punjab emerged unscathed, thanks mainly to the prompt safety measures implemented by the government. The army vigilance was intensified and Press censorship imposed on all papers published from Punjab so that no inciting news could reach the masses.

The new PM Rajiv Gandhi took over the task of sorting the Punjab tangle with a firm hand. During his election campaigning he unequivocally ruled out the acceptance of the Anandpur Sahib Resolution, perhaps the most important basis of the present Sikh agitation. However, to stifle the immediate protests by the Sikh high command, he offered to hand it over to the

move welcomed by the Sikhs too.

And now that the elections have established the Congress(I) and Rajiv as undisputed winners, Rajiv has, as one of his first prime ministerial moves, constituted a high level ministerial panel to find ways to resolve the Punjab problem. For the time being though, Assembly elections for Punjab have been postponed while Lok Sabha elections too were not held in the state. At the moment, the government is giving serious consideration to the Akali demands in an attempt to provide an already much-delayed solution.

Mizoram

The developments in Mizoram were encouraging towards the fourth quarter of '84. The government's negotiations with the Mizo National Front chief Laldenga kindled hopes that the 20-year-old insurgency problem may end soon. The government, however, had agreed to have discussions with Laldenga on the conditions that settlement was to be reached within the framework of the Constitution, that MNF would eschew violence and, finally that action against the rebels would not be stopped during the period. After several rounds of discussions, the government reached an agreement with the MNF chief on the broad outlines of a solution to the Mizo tangle. The government is considering the issue of granting statehood to Mizoram and rehabilitate the rebels who wish to lead a normal life. It must be admitted that this time the MNF chief gave up his stand on a Kashmir-like special status to Mizoram, which helped considerably in the negotiations. Still a few issues like granting special powers to the government of Mizoram, regularisation of trans-border trade between the Mizo tribals and neighbouring areas, remain unsolved. But what the future holds for Mizoram, will only be known after another round of discussions.

Tripura

In Tripura the situation became explosive towards the end of '84. The state was reeling under the onslaught of terrorist activities by the Tripura National Volunteers (TNV) who were demanding a separate state for the tribals of Tripura. The loot and mayhem let loose by the terrorists threatened to destabilise the entire north-eastern region. In order to press their claims for a 'free state for free tribals' a bandh was organised on Oct 15, which took a violent turn. The TNV freely circulated pamphlets condemning India's 'annexation' of Tripura and acclaimed the activities of other extremist groups in the country. In fact the date for the bandh was carefully chosen to coincide with the merger of erstwhile princely states with the Indian Union, in 1949. The objective was to strike an emotional chord in the hearts of tribals, reminding them that they are refugees in their own homeland. This time Bengalis were singled out for attack and over 70 people were killed. The list of casualties was alarmingly more than last year's figures. Despite such a serious situation, the state government was resisting the Centre's suggestions for deployment of the army in the entire state. There have been differences between the Centre, keen on

insisting on a political solution to current insurgency in Tripura. The Centre had been stressing that the state be declared a disturbed area. But the CPM Government strongly objected to this approach and the Tripura CM Nripen Chakravarty viewed this stand as the Centre's design to topple the only non-Congress(I) state in the north-eastern region. The Centre appointed a high-level team to solve the Tripura problem, which suggested strengthening of security forces and sealing of Tripura's eastern border with Bangladesh along Chittagong. The suggestions were more in line with the state government's stand. The insurgent activities abated towards the year end, when discussions with the MNF chief Laldenga, were underway. The strong link between TNV and MNF is probably the reason for the restraint in terrorist activities in Tripura. Nevertheless it is imperative that a comprehensive plan, combining political and security measures, be devised to ensure political stability in Tripura.

Manipur

Rough weather continued to prevail in Manipur in the past quarter. The pre-election preparations in the state took the form of defections and increased terrorist activities. In November an exodus of 14 Congress MLAs from the Manipur Ministry resulted in the Congress(I) losing its majority. Discontentment over the denial of party nominations resulted in the organisation of this mass defection. The ministry headed by CM Rishang Keishing which initially had 43 MLAs in the 60 member state Assembly was left with only 29. This had the Opposition clamouring for the dissolution of the ministry since it had no moral or constitutional right to continue. The crisis, however, ended a few days later with one of the defectors withdrawing his resignation when allotted a party ticket to contest the elections.

But this was not the end of the troubles for Keishing. On Dec 8, 1984 an abortive bid was made on the CM's life. While heading towards his constituency Phungyar to address an election meeting, his car was attacked by terrorists and although Keishing escaped unhurt, four of his security guards were killed and seven others injured. The Nationalist Socialist Council of Nagaland (NSCN) had engineered the attack.

This underground organisation is responsible for killing more than 90 people in the last few years, as a way of expressing its hostility against the Congress(I) rule. But despite these terror tactics and defections the Congress(I) emerged triumphant in Manipur capturing both the contested seats.

ECONOMY

Paul vs Escorts

The Swraj Paul vs Escorts case may well assume crucial importance for financial institutions as well as the corporate sector. And the decisions of both the High Court and Supreme Court during the last quarter of 1984 have given it an added significance. The High Court judgment on Nov 6 lent new dimensions to this case which had generated controversy since Sep 19, 1983 upon the release of certain circulars by the RBI conferring eligibility on

Non-resident Indian (NRI) companies to purchase shares in Indian companies in which the NRIs held 80% shares under the portfolio investment scheme. The Managing Director of Escorts Ltd. H.P. Nanda, had filed a petition earlier in the year challenging the legal and constitutional validity of these circulars in connection with the purchase of Escorts' shares by the Caparo group of companies controlled by the London-based Indian industrialist Swraj Paul.

The High Court verdict declared these purchases illegal and invalid because the NRI holding in the Caparo group was not the stipulated 60% at the time Paul made the purchases and neither had he obtained prior permission from the RBI before making the purchases through Punjab National Banks.

The participation of the Life Insurance Corporation (LIC) also ignited debate. This public sector institution owns 53% shares in Escorts along with other government owned financial institutions. On Feb 11, 1984 the LIC had acted arbitrarily when it called an extraordinary general meeting (EGM) in an attempt to replace nine of the 15 directors of the company with its own nominees. This was done when, having linked proposals to accept pre-payment of loan and merger of Escorts and Goetze with issue of registration of transfer of Caparo shares, the LIC failed to force Escorts to register the shares. The High Court annulled the EGM and the resolutions it passed.

Soon after the High Court verdict the Supreme Court, on Dec 10, 1984, stayed the judgment and fixed Feb 26, 1985 for the final hearing of the LIC appeal challenging the decision. Paul's Caparo group has made purchases amounting to nearly Rs13 crores in Indian companies. The fate of these purchases as well as the role of financial institutions and the corporate sector will be settled only then.

Resilience In Economy

Significant and sustained growth in the Gross National Product (GNP), a marked slowing down of the inflation rate and a surge in the level of foreign exchange reserves were the salient features of the Indian economy during 1984. The overall growth rate has been estimated at around 4.5-5.5%.

This growth can be attributed mainly to the record foodgrain production of 151m tonnes during 1983-84. At the end of the first week of December the annual rate of inflation based on the wholesale price index stood at 6.3% as compared to the 10% last year.

Pulses, sugar and edible oils, to some extent, accounted for the rise in wholesale price index. An 8.3% increase in manufactured products was also registered in the 12 months which ended on Dec 8, 1984.

The estimated 7% industrial growth rate was also significantly higher than last year's due to increased output of major industries including steel, cement, coal, electricity generation, fertilisers and crude petroleum. Also, an appreciable increase in approvals for capital issues, imports of capital goods and significant mobilisation of deposits by companies contributed to this. In the first nine months (Jan-Sep) of the fiscal year, 546 foreign collaborations and several non-resident Indian collaboration proposals were approved.

In the current fiscal year the government is

optimistic about effectively checking the rising trend in sugar prices, thanks to the larger increases of sugar in the market. With a comfortable stock of 20m tonnes of foodgrains for emergencies, the government is also hopeful about stable price behaviour.

Trade Deficit

The high trade deficit of about Rs 6,000 crores has become a major cause of concern for the commerce industry. And the likelihood of its succeeding in pegging this gap to around Rs5,000 crores in the current fiscal year is bleak.

The government's efforts to relieve this pressure on the country's balance of payments position by stepping up exports, adopting a selective approach and the simultaneous undertaking of a detailed exercise on import substitution in key sectors at least, in consultation with other concerned ministries have not been entirely successful either.

What is heartening, however, is the 8.6% upswing in overall exports in 1983-84 despite the continued deterioration evident in the international trade environment and the pursuance of protectionist policies by the industrialised countries. But in the same period imports decelerated by 8.6%, in sharp contrast to the high rate of growth of 37.3% in 1980-81.

Compared to the previous two years when exports and imports were provisionally placed at Rs 9,865.30 crores and Rs 15,762.95 crores respectively, India's trade deficit during 1983-84 increased leaving a gap of Rs 5,398.65 crores. This yawning trade deficit has been attributed to unexpected developments during the last quarter of the fiscal year. Also stoppage of export shipments because of the port and dock workers' strike in March coupled with a substantial increase in imports during the three-month period from December '83 to February '84 was responsible for a reversal in the trade balance situation.

While the import of crude oil and petroleum decreased from Rs 4,441 crores in 1982-83 to Rs 3,285 crores in 1983-84, there was a corresponding increase in imports of five major groups of products namely machinery and transport equipment (by 24.4%), cereals and cereal preparations (by 95%), semiprecious and precious stones and unprocessed pearls (by 59.8%), vegetable oils (by 139.1%) and chemicals (by 50%).

During the six month period from April to September '84 the provisional figures for exports and imports were Rs 5,054.3 crores and Rs 7,344.8 crores respectively and compared to Rs 2,425.2 crores in the corresponding period in 1983 the trade gap was less this year at Rs 2,290.5 crores.

In 1984 there was considerable diversification of India's product exports to the Socialist Bloc and emphasis was on engineering and manufactured goods. The USSR emerged as India's largest trade partner. However, owing to higher levels of imports, the trade gap with the EEC, the West Asian, North American and ESCAP countries remained considerably large.

Indo-Soviet Trade

Trade with the USSR, India's largest trade partner at present, is expected to increase by leaps and bounds this year. The protocol,

signed between the two countries in December 1984, envisages a trade turnover of Rs 4,620 crores in 1985. Of this total turnover, exports to the USSR are placed at Rs 2,500 crores—a rise of 25% over the 1984 exports. The imports from the Soviet Union are estimated to be Rs 2,120 crores this year as against the targetted level of Rs 1,840 crores in 1984—a nearly 15% rise.

Under this plan, a number of new items have been identified. For the first time Indian exports which already cover a wide range of products, will now include veterinary preparations, medical equipment and instruments and high quality wool products. Also envisaged is a significant breakthrough in many sectors of export including chemicals and allied products, textiles and engineering goods.

On its part, the Soviet Union too will, for the first time, supply synthetic rubber and a number of chemicals. It will also continue importing, as before, a large number of India's essential requirements of machinery and equipment, raw materials, non-ferrous metals, crude oil, petroleum products, fertilisers and newsprint. The USSR has also agreed to import 5 lakh tonnes of wheat from India on a non-returnable basis. India's coffee exports are expected to be about 30,000 tonnes in 1985.

If this envisaged turnover is achieved the targets laid down in the long-term programme of Economic Trade, Scientific and Technical cooperation will not only have been achieved but exceeded considerably. According to this programme, it was agreed by both countries that the growth in bilateral trade in 1981-85 should be 1.5 to 2 times that of 1976-80. And with the targetted level for 1985 being Rs 4,620 crores total trade for 1981-85 would have increased by more than 2.5 times of what it was in the preceding 1976-80 period.

ADB Loan

In November 1984 India decided to withdraw its application for a loan of \$ 2b from the Asian Development Bank (ADB). The decision came in the wake of the ADB move restricting the amount to a paltry \$ 200m only. Third among the top contributors to the ADB after the US and Japan with a contribution of \$ 115m to the Bank's capital India holds a 6% share. For the first time in 18 years India had approached the ADB for a loan on hard commercial terms and the rejection came as a surprise. The move was calculated and conducted step-by-step. The initial demand for \$ 2 b by India was first slashed down to \$ 1b. Then some member industrialised countries reduced their own contributions to the Bank. This was followed by the announcement that a loan of \$ 200m would be made available to India over the next three years once India had accepted the \$ 1b loan. In fact the US supported by Japan and the ASEAN felt that India could make do without such a big loan, particularly after the IMF loan and, describing it as better-off than other countries, felt that it should not borrow at the expense of the existing needy borrowers. Rightly offended by this slighting attitude of the ADB India has decided not to press the loan issue further specially in the light of the fact that developed countries go all out to discourage developing countries by erecting protectionist walls.

WORLD

PEOPLE

Alliluyeva, Svetlana: Daughter of the late Soviet leader, Josef V. Stalin, returned to Moscow on Nov 1. Her return ended 17 years of self-imposed exile as a defector.

Anderson, Hans Christian: A book meant for a little girl named Christine has brought fame to the storyteller almost 110 years after his death. Published for the first time, *Christine's Picture Book* was reproduced in facsimile on Oct 25, to mark the heroine's 125th birthday.

Arafat, Yasser: PLO leader, escaped an assassination attempt by opponents who sabotaged a plane taking him from North Yemen to Iraq. Luckily, the plane developed serious problems shortly after take-off and was forced to make an emergency landing on Oct 19.

Azmi, al-Mufti: Jordan's Ambassador to Romania, assassinated in Bucharest on Dec 4. The killer was arrested.

Barfield, Velma: First woman to be put to death in the US, when she was executed by injection on Nov 2; she had killed her boyfriend by feeding him ant poison.

Blaise, Herbert: Leader of the US-backed New National Party, sworn PM of Grenada on Dec 4.

Fae, Baby: Month-old infant who received a baboon's heart to replace her own congenitally deformed one, died on Nov 15.

Donovan, Raymond: US Secretary of Labour, indicted by a grand jury in New York on criminal charges in connection with his past business dealings as a construction executive.

Faiz Ahmed Faiz: The revolutionary Urdu poet and scholar and editor of *Pakistan Times*, died of cardiac arrest in Lahore on Nov 2. He was an influential force in both Pakistani and Indian literature, in Urdu.

Fonda, Jane: Won her first Emmy Award as Best Actress in ABC's *The Dollmaker*.

Haq, Zia-ul: Pakistan President, was given a fresh mandate of five years, receiving more than 60% votes in his favour in the countrywide referendum conducted on Dec 19.

Herrera Astrid: Miss Venezuela, crowned Miss World 1984 at London's Royal Albert Hall on Nov 15.

Khan, Air Marshal (Retd) Asghar: Chief of the Tehrik-e-istiqlal Party, of Pakistan who spear-headed the Opposition movement against the imposition of martial law in 1977, pledged support to the Movement for Restoration of Democracy immediately after his release on Oct 2 from a five-year detention.

Kikoin, K. Isaac: A physicist who pioneered semi-conductor research and the development of Soviet nuclear science, died on Dec 27. He was 76.

Mahmood Sultan Iskandar: Crowned the VIII King of Malaysia on Nov 14. The 52-year-old King took over from Apr 26, following the expiry of the seventh King.

Mannin, Ethel: One of the most contemporary British writers from the 1920s to 1970s, died on Dec 5 in London at the age of 84. She had written fiction, biographies, memoirs and travelogues that included sympathetic accounts

Mathura, Cyril St Larkin Minister of Industries and Scientific Affairs, sacked in Colombo on Dec 24. He was replaced by the Deputy Minister of Industries **Daniell Fernando**.

Miller, W. Richard: A Federal Bureau of Investigation (FBI) veteran, arrested in Los Angeles on Oct 4, on espionage charges, was accused of selling secrets to a female Soviet agent and her estranged husband, Miller is the first FBI agent ever charged with espionage, and the case marked the first known foreign infiltration of the US agency.

Mondale, Walter: The dignified loser in the US presidential race, announced on Nov 7 that he would not stand for any public office again. He added that one of the reasons he lost was that he had not mastered the television as his opponent had.

Montagu, Ivor: Prominent British Communist Party leader, founder of the World Peace Council and Lenin Prize-winner, died in London on Nov 7. He was 79.

Murphy, Richard: US Assistant Secretary of State, arrived in New Delhi on Oct 20, on a three-day visit during which the two countries hoped to renew bilateral ties, particularly in the context of American arms supply to Pakistan.

Pekinpah, Sam: Director of violent and controversial films like *The Wild Bunch* and *The Dirty Dozen*, died on Dec 28 in California.

Popieluszko, Jerzy: Prominent supporter of the outlawed Polish Solidarity trade union, murdered on Oct 29. The murder has infuriated Solidarity members and other Poles who shared his religious convictions and his dedication to non-violent change.

Reagan, Ronald: 73-year-old American President, won a second term in the White House as the Americans handed him an overwhelming victory in 49 of the 50 states on Nov 7.

Sokolov, Valentin: Soviet dissident poet, died in early November in a psychiatric clinic. He won the French Pen Club's Freedom Prize and was proposed for the Nobel Prize for Literature.

Stanfield, Agnes Von Kurowsky: Whose brief romance with Ernest Hemingway in Italy in 1918 became the central element in his novel *A Farewell To Arms*, died on Nov 25 at the age of 92.

Thatcher, Margaret: British PM, escaped assassination attempt in Brighton (England) on Oct 12, for which the Irish Republican Army claimed responsibility. She called it "an inhuman, indiscriminate attempt to massacre innocent men and women".

Truffaut, Francois: France's "irreplaceable film-maker" died on Oct 21 in Paris. He established the Auteur theory—director as author of his work. His best-known movies include, *The Last Metro*, *Jules And Jim*; his final film *Confidentially Yours* was a commercial success.

Ustinov, Marshal Fedorovich Dmitri: Soviet Defence Minister, died on Dec 20. He was 76. Ustinov graduated as a military engineer and, prior to World War II, was engaged in designing work in military establishments.

Valery, Paphov: Soviet scientist, died on Dec 12. He made an essential contribution to the development of electron technology, represented the USSR at the International Electrotechnical Commission serving as its Vice-President and President.

Vatchanka, F. Alexia: President of the

Presidents of the Soviet Union, died on Nov 22. He was 70.

Werner, Oskar: Austrian film actor who played Jules in Truffaut's *Jules And Jim*, died in Marburg (West Germany) on Oct 24, two days after the death of the French director.

Xiaoqing, Deng: Chinese Communist Party leader called upon Japanese businessmen on Oct 23 to invest in North Korea, which is in need of capital and advanced technology and had begun pursuing an open-door policy like China.

Yamani, Zaki Ahmed: Saudi Arabia's Oil Minister met with Egypt's President Hosni Mubarak in a highest-level official contact between Riyadh and Cairo since the 1979 Arab League boycott of Egypt after it had signed the peace treaty with Israel.

Yen, Walters Verner: US President's Ambassador-at-large, one of the trouble-shooters of the Reagan Administration, arrived in New Delhi on Dec 12, after a two-day visit to Colombo for talks on the Tamil problem in Sri Lanka.

PLACES

Bahrain: A Kuwait Airlines Airbus, on a routine flight from Kuwait to Karachi was commandeered into Iranian airspace between Bombay and Bahrain, where an Iranian fighter plane, challenged it on Dec 4. ● In another instance of destruction, a Cypriot supertanker was set ablaze by Iraqi airborne Exocet missiles on Dec 3, while it was going to take oil from Iran's Kharg Island.

Chile, Santiago: A Chilean woman has given birth to the first Antarctic baby in the last week of November, on the icy, uninhabited continent. Six Chilean families with 18 members emigrated in February '84 for two years; they will be replaced by another six families.

China: celebrated its 35th anniversary under Communist rule on Oct 1, with a strong endorsement of its open-door policy and a call for reunification with Taiwan.

Grenada, St George: US-favoured New National Party (NNP), won a landslide victory in this Caribbean nation's first general elections in eight years, which saw a leftist coup in 1979 and an American-led invasion in 1983.

Kuwait: Gulf countries have initiated steps to protect their oil tankers from attack. A rapid deployment force (RDF) is being set up to coordinate defences of the six Gulf Cooperation Council (GCC) countries.

Lebanon, Beirut: Syrian officials met in Damascus with leaders of the other Arab nations on Sep 30, opposing Jordan's renewed ties with Egypt.

Mexico, Mexico City: A series of explosions in a natural gas processing complex rocked the capital on Nov 19. Lower parts of the old Mexican capital are sinking at the rate of 9 cm a year, due to the high increase in the extraction of underground water.

Nicaragua, Managua: Sandinistas won the first presidential and national Assembly elections in Nicaragua on Nov 9, since they overthrew the four-decade-old Somoza dynastic dictatorship in 1979.

Norway, Oslo: A bomb threat interrupted the presentation of the Nobel Prize on Dec 10 for the first time in its 83-year history. The ceremony was resumed after a thorough check-

Rich Hall

Karachi: Abdul Qadeer Khan, a top nuclear scientist, claims that the country could manufacture a hydrogen bomb, but would not do so for "we believe in the peaceful uses of nuclear capability". He said India was ahead of Pakistan in several sectors of nuclear technology and Islamabad was trying to catch up at the earliest.

South Africa, Sobokeng: About 2,300 people were arrested in the black township of Sobokeng, 64 km. south of Johannesburg on Nov 14, in what is believed to be South Africa's biggest raid against blacks living in work hostels. Contract workers living in the township's squalid barracks were tried in special courts, many pleaded guilty and paid fines on charges of non-payment of rent.

Sri Lanka, Colombo: A Japanese monk accused by Tamil militants of being a CIA agent, was shot dead in northern Jaffna on Oct 28.

Switzerland, Geneva: Poland withdrew from the International Labour Organisation (ILO) after an investigation committee of the ILO accused the Warsaw Government of violating trade union rights.

US, Alabama: America's first space traveller, a 27-year-old squirrel monkey named Miss Baker, died of a serious kidney ailment. She went into space on May 28, 1959 with another monkey Able, aboard a Jupiter rocket. Able died shortly after the orbital flight.

Cape Canaveral: Ground engineers repaired the space shuttle Challenger's radio relay satellite on Oct 9. The satellite is used to send some of the spacecraft's communications and all of its radar pictures to earth. On Oct 12, Challenger soared into orbit exactly one month after sister ship Discovery returned to earth from its maiden journey. It was a mission of firsts—first seven-person crew; first time two women were on the same spacecraft; first American woman, Sally Ride, to take a second space trip; first astronaut to make four shuttle flights, Commander Robert Crippen; first flight of Canadian astronaut, Marc Garneau and the first demonstration of a satellite refuelling technique in space.

New York: Scientists at the Cornell University have gathered experimental evidence for the first time to show that diamond, the toughest material, can be melted with the help of a laser beam. ● A law firm filed an all-time record damage suit for \$80b on Dec 28 against the Union Carbide Corporation for the gas leak that killed more than 2,000 people in Bhopal.

Washington: The Reagan Administration has eased rules on nuclear cooperation with South Africa by arranging sale of nuclear fuel and uranium. ● The US withdrew formally from UNESCO on Dec 20 because of complaints about its Third World policies and budget.

USSR, Dushanbe: Soviet cosmonauts have photographed Halley's Comet; this celestial wonder comes close to the sun once in 76 years.

AWARDS

The 1984 Nobel Prize for Literature to Czech dissident poet Jaroslav Seifert, 83, for his poetry, which is endowed with freshness, sensuality and inventiveness against a backdrop which portrays the indomitable spirit of man. **For Medicine**, jointly to three immunologists—

London-born Nial V. Jané, West German Georges F. Koehler and Argentine Cesar Milstein—for their theories on the control and development of the immune system and discovery of the principle for production of "monoclonal antibodies". **For Peace** to Bishop Tutu, 53, the anti-apartheid leader of the South African Council of Churches. The Norwegian Nobel Committee called him "a unifying leader figure in the campaign to resolve the problem of apartheid in South Africa". **For Economics** to Sir Richard Stone, 71, of Britain's Cambridge University, for fundamental research on national accountancy systems that had radically improved the basis for empirical economic analysis. **For Physics**, jointly to nuclear physicists, Carlo Rubbia (Italy) and Simon Van Der Meer (Netherlands) respectively, for their work at the European Nuclear Research Organisation (GERN) in Geneva, which has led to the discovery of "field particles W and Z" communicators of weak interaction". **For Chemistry** to Prof R. Bruce Merrifield, of the Rockefeller University in the US, for developing a simple and ingenious method for obtaining peptides and proteins".

The Booker McConnell Prize, Britain's richest literary award, to art historian Anita Brookner for her novel *Hotel Du Lac*.

The Goncourt Prize, one of France's highest literary awards, to Marguerite Duras, 70, for her novel *L'Amant* (The Lover).

EVENTS SOUTH ASIA Pakistan

Pakistan opened this quarter with a spate of Shia-Sunni riots which rendered at least five dead, 200 wounded and property worth several millions lost or damaged. Trouble broke out on the day of Ashura, when the Shias commemorate the martyrdom of Prophet Muhammad's grandson Hussein. Sunnis in Karachi objected to a Shia procession entering a street outside its traditional route. There were rumours that the Sunnis had burnt down a Shia mosque. The Shias retaliated by leading their procession towards a central Sunni mosque and burning down shops adjacent to it. There was trouble in several towns in Punjab and Sindh, but violence was contained. Parts of Karachi were put under curfew and several religious leaders as well as 300 rioters were rounded up by the police. Shia-Sunni problems have increased since Islamisation became a major constitutional issue. Earlier the differences had been merely academic but now they have become constitutional.

In the political field, major developments took place in December. In a surprise TV broadcast, President Zia-ul-Haq announced that he would hold a referendum on Islamisation on Dec 19. The Pakistanis would be asked to endorse a lengthy Islamisation programme with a simple "yes" or "no". It was a dual plan; if the majority voted yes, then not only would the programme be implemented but Zia would be elected for five years to carry out the programme and amend the constitution to make it thoroughly Islamic. The Opposition, calling the referendum a great hoax, called on the people to boycott it. The government retaliated

with a complete blackout of the nation's media of boycott appeals. Zia also announced new laws which made it a crime to call for a boycott of all referenda and elections, punishable by three-years' imprisonment. The law also debarred anyone convicted for organising a boycott, from membership of any legislative body for seven years.

In spite of all this, when the election was duly held, the voter turnout was very low. Zia received a majority of the votes cast and is, therefore, President for the next five years. He has promised elections by March 1985.

Bangladesh

Parliamentary elections were due in Bangladesh on Dec 8. On Oct 11, President Ershad announced that he would lift martial law, in phases, if the major opposition parties agreed to participate in the elections. On Nov 1, the day after the filing of nomination papers, he would abolish the offices of district martial law administrators; after a fortnight, he would wind up the offices of sub-zonal martial law administrators and on Dec 1 the posts of deputy chief martial law administrators would be ended. Fundamental rights would also be restored and martial law would end with the beginning of the new Parliamentary session.

The seven party alliance, led by the leader of the Bangladesh National Party (BNP), Begum Khaleda Zia and the 15-party alliance led by the Awami League leader, Sheikh Hasina waded, both decided at rallies held on Oct 14 that Ershad's proposals were unacceptable. They stated that they would not participate in the elections unless martial law was lifted immediately and a neutral government was formed for holding "free and fair elections". Former President Abdus Sattar, who was ousted by Ershad in a military coup in March 1982 also addressed the seven-party alliance and said, in a major statement, that he had been ousted by force and that he would be "compelled to summon the Parliament that has been dissolved" unless the two main opposition groups' five-point demand was met immediately. While Ershad has met most of the demands, he has not heeded its two important points — the immediate lifting of the martial law and restoration of fundamental rights. The opposition parties also proposed to hold a 24-hour strike on Dec 8 and a civil disobedience movement from Dec 9.

Under such pressure, Ershad postponed the elections. He also promised not to campaign for his own party, the Jana Dal, and to make his ministers resign from the Cabinet before filing in their nominations. Although the opposition leaders, particularly Begum Zia, showed some flexibility, there were a number of incidents of violence in these three months.

Sri Lanka

A fresh wave of violence began on Nov 20 with an attack on a police station at Chaukacheri, in northern Sri Lanka, in which a group of 35 guerrillas stormed the police station, made off with arms and ammunition and left 24 policemen dead. Two organisations, the Tamil Eelam Liberation Organisation and the Liberation Tigers of Tamil Eelam claimed responsibility. In the following weeks the guerrillas stepped

up their activities and at least 180 people died. The government imposed emergency regulations and the air force and navy were brought in to combat the guerillas. On Nov 30, the guerillas killed about 150 Sinhalese in two separate attacks on farm settlements in the Mullaitivu and Vavuniya districts. The government forces retaliated at Mannar where 102 Tamil civilians were killed between Dec 2 and 4. According to government sources, the Tamil terrorists are trying to provoke a repetition of the arson and murder launched in July 1983 by the Sinhalese, to attract world sympathy.

To diffuse the situation, President Junius Jayewardene called another meeting of the All Party Conference on Dec 14, and put up a proposal to reorganise the local government and create a "council of state" which would have 75 members, one-third of whom would be appointed by the president while the remainder would represent district councils. The response however, was lukewarm and Jayewardene dropped the proposals.

Meanwhile, President Reagan's ambassador-at-large, Gen Vernon Walters visited Colombo and New Delhi in December in a bid to diffuse the situation. Shortly before Walter's visit to Colombo, Washington had issued a statement deploring the guerilla attacks as a serious and unwarranted challenge to the government of a practising democracy. Walters' visit raised hopes of US military support or supply of much-needed military hardware. However, Reagan's envoy's message was that the solution to the problem should be political and not military. Gen Walters said that if Jayewardene were to sell a devolution package to the Tamils who may be willing to compromise, the US may think again about military aid for suppressing the guerillas. In New Delhi, too, Walters reiterated that the solution to the problem should be political and not military.

Meanwhile, relations between Sri Lanka and India took a turn for the worse as several attacks were made by the Sri Lankan navy on Indian fishing boats in Indian waters. Sri Lanka alleged that Tamil guerillas were being trained on Indian soil. While India denied all such allegations as ridiculous, the PM, Rajiv Gandhi accused the troops of indiscriminate killings. Colombo took exception to this statement and stated that such language and tone could only encourage terrorists and their supporters, both in India and in Sri Lanka.

South-East Asia Singapore

It was a foregone conclusion that PM Lee Kuan Yew's People's Action Party (PAP) would return to Parliament with flying colours in the general elections which were held on Dec 22. On the nomination day itself it came out that the PAP had been returned, unopposed, to 30 of the 79 seats in the House. Among these were Lee Kuan Yew and his six Cabinet ministers. The opposition parties fielded 51 candidates for the remaining seats. Among the important opposition parties were the Workers' Party (WP), the Singapore United Front (SUF) and the United People's Front (UPF). The PAP, however, has been in power for the last 25 years and has exercised great control over the life of Singaporeans. The Opposition, on the

other hand, suffers from a lack of resources, funds and manpower.

Before the elections, the PAP published a document titled 'Agenda for Action in the Year 1999' which was virtually its election manifesto. It said that by 1999 Singapore will be a developed city-state with a per capita income equal to that of Switzerland today. It also stated that a virtually new city, Marina Bay, would be constructed by the end of the century. Further, all Singaporeans would own their own houses and there would be a cultivated society which would be caring and compassionate. It now remains for the PAP to carry out its programme.

Indonesia

There was general discontent in Indonesia starting with the Tanjungpriok incident in September, when Muslim rioters clashed with the police and the troops. Although the government said that 18 people had been killed, unofficial estimates put it around 100. Shortly afterwards, 22 members of the Oppositionist Petition of 50 group, which had been formed in 1980 and has since been demanding a more open government, greater economic equity and political participation and the eradication of corruption, signed a document challenging armed forces commander Gen Benny Murdani's account of the incident and calling for further investigation by an independent commission. Murdani condemned the document as an example of subversive literature and called in several of the signatories for questioning. Some members of the Petition of 50 group were arrested including retired Lt Gen H.R. Dharsono and the leader of the reformist Islamic group, Muhammadiyah, H.M. Sanusi. Dharsono was accused of attending a meeting in September in which bomb explosions which took place at branches of Bank Central Asia, owned by a business associate of President Suharto, were planned.

There have also been cases of arson in Jakarta and there appears to be a growing opposition to Suharto's 19-year rule over Indonesia. Many Muslims resent Suharto's insistence that his philosophical political ideology of Pancasila should be adopted by every organisation. The government, however, has responded with a mixture of toughness and conciliation. Gen Murdani made several trips to Java to meet Islamic scholars and assured them that the Armed Forces Republic of Indonesia (Abri) would never restrict legitimate religious activities. Muslims account for 90% of the population and for 99% of the Abri. The government, therefore, cannot afford to dis-satisfy the Muslims.

Kampuchea-Vietnam

Prince Norodom Sihanouk visited the US in November but met with demonstrations at Minneapolis led by supporters of former Kampuchean PM Son Sann, who called themselves Americans for a free Cambodia. They blamed the Prince for bringing the Khmer Rouge disaster to Kampuchea and criticised him for continuing his cooperation with China. Sihanouk thereafter froze his relations with Son Sann and his group. The Khmer People's National Liberation Front (KPNLF) He also stated that he had

visited the government of Democratic Kampuchea, but had been prevented from doing so by the ASEAN, China and the coalition partners.

The first fighting of the year on the Thai-Kampuchean border also broke out between the Vietnamese and the Kampuchean resistance forces in November. Although it did not go too well for the Vietnamese, sources close to Hanoi say that they are planning a much larger offensive on the Thai border.

Meanwhile, the anti-Vietnamese, Democratic Kampuchea's three coalition components had a secret meeting in New York during the 39th UN General Assembly session. A plan was presented according to which the coalition government proposed to delink itself from the genocidal Pol Pot regime which held power in 1975-78. It also suggested that the name Democratic Kampuchea would be changed, the national flag and anthem would also be changed and new passports issued. The leaders would also agree to activate a concept of equality among the coalition's three factions. It is now dominated by the Khmer Rouge, both at the military and diplomatic levels. While the two non-communist components appeared agreeable to the plan, the Khmer Rouge representative, Vice-President for Foreign Affairs, Khieu Samphan, rejected it outright.

Far East & Australia Philippines

After months of evidence collection, the Agrava Commission, which had been set up to investigate the Aug 21, 1983 airport murder of opposition leader Benigno Aquino, submitted two reports on Oct 23 and 24. Both the reports said that Rolando Galman, who the government claimed had been hired by the Communist Party of the Philippines (CPP) to shoot Aquino, was not responsible for the murder. One of the five military escorts bringing Aquino down from the aeroplane, to a waiting van on the tarmac, was the culprit. Both the reports also stated that there was a military conspiracy to kill Aquino. Where the reports differed was that while the Agrava Commission in its 121-page report limited the alleged conspiracy to seven military men—Aquino's escorts and the Aviation Security Command (Avsecom) Chief Brig Gen Custodio, the 454-page majority report of Dante Santos, Luciano Saizarr, Amado Dizon and Ernesto Herrera, recommended the prosecution of 25 military personnel, including Chief of Staff, Gen Fabian Ver, and one civilian.

Gen Ver voluntarily asked for indefinite leave pending his trial and also demanded an immediate and separate trial, waiving his right to a preliminary investigation. His place was taken over by his deputy Lt Gen Fidel Ramos. Shortly afterwards, in a show of unity, 68 of the 83 generals in the armed forces issued a "manifesto" declaring "unwavering loyalty and support" for Ver. The Opposition criticised this statement saying that the military should be loyal to the country, Constitution and civilian government and not to any individual. The charges on Ver are important, because of its implications of involvement of people other than those immediately concerned with the murder. In fact, indirectly the charges could lead to President Marcos himself, because as the Opposition

have come from the highest level. The investigations and indictments have now moved to the courts, specifically the anti-graft and corruption court, the Sandiganbayan, which was set up by the 1973 Constitution.

At another level, there was an increase in communist violence, specially in the southern island of Mindanao, in this quarter. Early in December, Marcos met senior commanders of the Armed Forces of the Philippines (AFP) to chalk out policies to end the shooting and ambushes directed against both military and civilian targets. According to Lt Gen Ramos, more than 100 people were killed in recent violence in Mindanao. Marcos and his generals began a "no compromise" military campaign to deal with the problem.

Marcos himself became the centre of much speculation in this period as reports came in that he had either undergone exploratory surgery, a kidney transplant or a tracheotomy. He disappeared from public view on Nov 13, although the Mala-Canang Palace showed photos of Marcos reading a current newspaper. A videotape was also shown to prove that he was still alive. Under the circumstances, Philippine analysts conjectured about the future of the islands after Marcos.

The Koreans

It seemed as though the two Koreas would finally come together at least on major issues. Non-governmental talks, on forming a single team for the Los Angeles Olympics (which succeeded), had been held earlier in the year. On Nov 15, however, Pyongyang finally decided to talk to representatives of the South Korean President Chun Doo Hwan. The talks were aimed at exchanging ideas and settling upon an agenda for later talks, at a ministerial level, regarding possible economic relations between the two Koreas. Both sides decided to hold higher-level talks on Dec 5, to discuss trade and cooperation.

However, on Nov 23, ill-timed defection by Soviet diplomat Vasily Yakovlevich Matuzok, cooled matters between the two countries all over again. Matuzok crossed the Joint Security Area at Panmunjon and defected to South Korea. The problem was that North Korean troops chased him and entered the UN Command controlled side of the Joint Security Area, where they are strictly banned. During an exchange of gunfire, one South Korean soldier and three North Korean guards were killed. While the South Korean Government issued a strong statement condemning the intrusion as a "criminal provocation threatening peace" Pyongyang announced that it was postponing trade talks till 1985.

Beijing, however, is keen that North Korea should mend fences. Just three days after the Panmunjon incident, North Korean President Kim Il Sung paid an unheralded visit to China. According to reports, the shooting and its effect on the dialogue between the Koreans was on the agenda of talks between the North Korean and Chinese leaders. Only a day after the shooting, Chinese leader Deng Xiaoping told a Japanese visitor that China supported the current series of talks between the two Koreas.

On the home front, South Korean President Chun decided on Nov 30, to allow all but one

opponent of his adversaries to resume political activities following a four-year ban. This included the right to vote and stand for public office—even for the National Assembly. Political ban was thus lifted on 84 politicians who had been prominent in the Opposition during the previous regime of the assassinated President Park Cheng Hee. However, 15 opposition leaders are still under the ban. These include powerful Opposition figures like Kim Dae Jung, the former Opposition presidential candidate now in exile in the US, Kim Young Sam, President of the outlawed New Democratic Party and Kim Jong Pil, a former PM. The other politicians who got back their civil rights are determined to run in the parliamentary elections and at present they are negotiating to launch a single, unified opposition party to challenge the Democratic Korea Party (DKP) which is already in existence and is the second largest group in the 276-member National Assembly.

China

China made significant strides towards a new kind of socialism in this period. A document entitled 'A Decision of the Central Committee of the Communist Party of China on Reform of the Economic Structure' was unanimously adopted by the XII Central Committee of the Chinese Communist Party in its third plenary session on Oct 20. The document focussed on urban industrial and commercial reforms without describing the new policies in detail. Most of the document was devoted to explaining why the reforms were necessary and how they were to be reconciled with the concept of China as a socialist country. It stated that the major defects of the socialist system were lack of distinction between the functions of the government and enterprises, bureaucratic and geographical barriers, excessive and rigid state control of enterprises, failure to attach adequate importance to the law of value and the regulatory role of the market, and egalitarianism in distribution which sapped the initiative of enterprises and workers. China, it said had a "rigid economic structure" which could not meet the needs of the growing forces of production. To stimulate the forces of production, it was necessary even to "draw upon the world's advanced methods of management, including those of developed capitalist countries, that conform to the laws of modern socialised production".

The document stated that while the principle of ownerships of the means of production by the people was to be upheld, ownership would be "separated from the power of operation". Enterprises would thus be independent entities responsible for their own profits and losses. Furthermore, while the leadership of the Communist Party was to continue, its role would be to formulate strategy and not to manage or operate enterprises. Although the principle of planned economy would be continued, mandatory planning would be reduced in favour of guidance planning and regulation by free-market forces.

This document was a victory for Deng Xiaoping and other reformists who wish to overthrow the Soviet model of a centralised socialist economy. In the political field too, reforms are afoot. On Nov 13, Shaanxi province became the first province in China to hold a secret ballot for the election of a senior party official. So far,

party officials have been selected by their higher-ups. In Shaanxi, however, 300 county and provincials elected their party secretary. However, the higher-ups still retain their veto power.

In the diplomatic field, China has been playing a well-balanced game. In preparation for a visit by the Chairman of the US Joint Chiefs of Staff, Gen John Vessey, in January which is to be followed by the first US Navy visit to China since 1949, a Chinese Navy delegation led by Deputy Chief of Navy Staff, Admiral Chen Youming paid a month-long visit to America in November-December. The delegation comprised experts on navy projects proposed for future Sino-American military technical cooperation. The USSR, too, was not ignored and the Soviet first Deputy Premier Fyev Arkhipov paid a visit to Beijing on Dec 21. He was the highest Soviet leader to visit China since 1969. Despite the fact that the three obstacles between Beijing and Moscow—the presence of Soviet troops on the Chinese border, the Soviet occupation of Afghanistan and the Vietnamese occupation of Kampuchea—have not been removed, business was separated from politics and accord was reached in areas of trade, student exchange, tourism and culture.

Hong Kong

On Dec 14, the Sino-British joint declaration on the future of Hong Kong was signed by British PM, Margaret Thatcher and the Chinese Premier, Zhao Ziyang at Beijing, and Britain began the official process of handing over Hong Kong back to China. The joint declaration will come into force before June 30, 1985, after ratification by both the countries.

Although Hong Kong was represented at the signing ceremony by 101 invitees, the people of Hong Kong were by no means euphoric. An Assessment Office set up on Sep 1, to test the acceptability of the draft agreement, reported on Nov 29 that it was acceptable to "most of the people of Hong Kong". However, the Office was highly criticised in Hong Kong as a farce, since the joint declaration could not be changed by the people of Hong Kong. During its assessment period the office made a sample survey of 679 organisations and 1,815 individuals of which 33 organisations and 364 individuals rejected the agreement outright and challenged the right of Britain and China to determine the future of Hong Kong. They wanted either a status quo or for Hong Kong to have the right of self-determination. Of those who accepted the declaration, many did so with reservations and expressed their doubt about the concept of "one country, two systems". They also wanted the Hong Kong people's participation in the drafting of the Basic Law (the Constitution of the future Hong Kong Special Administrative Region), and in the joint liaison group and the Land Commission, which will be set up soon to deal with problems arising during the transition period.

Japan

Yasuhiro Nakasone was reappointed President of his Liberal Democratic Party (LDP) for a further two-year term (his second and last under party rules). This job carries with it the prime ministership. However, all was not smooth sail-

up their activities and at least 1,000... ing. Not only was he opposed by the anti-mainstreamists within the party, but Susumo Nikaïdo, a member of the Tanaka faction to which Nakasone belongs, made personal attacks on him and decided to stand as a candidate for the party leadership. He was asked to do so by Zenko Suzuki a former PM and till then, a pro-Nakasone man. Although Nikaïdo was forced to step down by Tanaka 'loyalists', it is significant to note that the Tanaka faction—the LDP's largest factional grouping—is highly divided. It has also emerged that many of the party leaders do not favour Nakasone's "charismatic" style of leadership and consider him "arrogant".

Australia and New Zealand

A landslide victory had been forecast for Australian PM Bob Hawke in the Dec 1 election. But something went wrong and although the Labour Party won, its majority was halved in the House of Representatives and the conservative Opposition coalition of the Liberal Party and the rural based National Party increased their seats. Hawke attributed his failure to certain electoral reforms that had been introduced recently with which the electorate was not familiar. Some analysts, however, felt that certain sections of the electorate like the retired people who have been hit by new restrictions on eligibility for government pensions, voted against his party.

On the diplomatic front, Australia and Indonesia studied a proposal to set aside a long-standing deadlock over where to draw a boundary line south of East Timor. According to Indonesia Foreign Minister, Mochtar Kusumaatmadja, the two countries are considering a jointly administered zone in the disputed areas to look for oil and minerals. A three day meeting was held in Jakarta in November to discuss the issue of boundary differences. Meanwhile, in New Zealand, an 11-day military exercise began on Oct 5 which included the forces of its ANZUS allies, Australia and the US. American warships were not involved because the Labour Government is pledged not to let any nuclear-powered or nuclear-armed ship enter the country's ports.

EUROPE Britain

Fortune proved kind to the British PM Margaret Thatcher, in October, when an IRA bomb demolished four floors of Brighton Hotel, where she was staying for the annual party conference of Britain's Conservative Party. The explosives had apparently been planted under the floorboards weeks earlier and detonated by a microchip timer. Other Tory members were not so lucky: Eric Taylor, Sir Anthony Berry and Jean Shattock were among those who died, while the Tory's chief whip, John Wakeham, and Thatcher's probable heir apparent in the party, Norman Tebbit, were seriously injured. After the attack the IRA issued a statement claiming responsibility.

What the IRA wants is independence for North Ireland. But, in late November, Thatcher made it clear that "North Ireland is part of the United Kingdom", rejecting Irish unification in the firmest statement ever uttered by a British PM. She rejected strategies proposed by the

Irish Forum, a... which suggested three options for changing the way the North is ruled—unification, confederation, or joint authority over the North between Dublin and London.

Meanwhile, the coal strike went through some rough times. In November, there was violence in south Yorkshire, when hundreds of British mine workers and their supporters descended on coal-belt communities, roughed up local managers, plundered shops and damaged 25 collieries. Fifty-four people were injured and 45 persons arrested. The raiders had hoped to discourage miners from crossing the picket lines. However, a large number of miners did return to work. By the third week of November, 59,000 of Britain's 1,89,000 miners had defied Arthur Scargill, the leader of the National Union of Mineworkers (NUM), and had returned to their jobs. To induce more to return, the Coal Board extended its offer of a bonus package to those willing to work during the Christmas season, which would provide each miner with \$ 1,230 in wages and benefits through the end of the year. However, Scargill gave no signs of giving up and the strike continued. In a surprising move, the Archbishop of Canterbury, Dr Robert Runcie, publicly criticised the Tory Government's handling of the long miner's strike, saying that its economic policies were leading to long-term unemployment, party violence and despair.

On the diplomatic front, the French President Francois Mitterrand visited Britain. Matters were slightly strained when a French bomb disposal expert placed two four-ounce packets of plastic explosives on the grounds of the French embassy and asked the British police to make a



For whom does the bell toll: Anti-British posters.

security check. Although the bombs were immediately located and the French police spokesman said that they were testing the ability of the British police to protect Mitterrand, the Parliament considered it a "sick joke" and asked for the recall of the French ambassador to Britain. The second in command in the Kremlin and the probable heir apparent of Konstantin Chernenko, Mikhail Gorbachov, also visited Britain in late December and held arms control talks with Thatcher. The visit was considered to be very successful.

Relations with Spain appeared to take an upward swing as the Spanish and British governments announced on Nov 27 that they had agreed to normalise relations between Spain and Gibraltar. If carried through, as planned, this agreement will mean freedom of communication between Spain and the British dependency. The two countries also agreed to hold talks on other matters, including the sovereignty issue in a way that would "respect the wishes" of Gibraltar's inhabitants.

Spain

Spain itself faced a major problem on the ninth death anniversary of the fascist ultra-rightist Francisco Franco. In the Basque country, a prominent separatist leader, Dr Santiago Brouard, was killed by unknown assassins, but many of his supporters felt that he was shot with the sanction of the government. The assassination triggered off massive rioting and a retaliatory strike on Gen Luis Roaon. Later, the ETA (the Basque terrorist group) also killed a policeman and injured another.

In Madrid, around the same time, the conservatives staged the largest demonstration ever held against the PM, Felipe Gonzalez's socialist government, to protest against its proposals for educational reforms; the government wants to have its control over private schools, most of which are run by the Roman Catholic Church. In late December, some liberals and moderate conservatives also inaugurated a Reformist Party, whose intention is to wedge itself between Gonzales and the far right. All this goes to show that Spain's attachment to Gonzales and his youthful Cabinet may be waning.

France

The French Communist Party (PCF) showed signs of grave internal dissensions in this quarter. In October a draft resolution of the party blasted the socialists for following "capitalist" policies.

The PCF also announced that it will abstain from the first reading of Mitterrand's 1985 budget. The party leaders had also proposed dropping the so-called union of the left, which had allied the communists with French socialists on and off over the last 25 years. The moderate wing protested against this and six top party officials abstained from a crucial vote on party strategy.

West Germany

The "Flick" affair, the biggest political scandal in West German history, spread further when Chancellor Helmut Kohl admitted before a special parliamentary committee that from 1977 to 1979, as leader of the then Opposition the Christain Democratic Union (CDU), he had received \$ 53,000 from an executive of the Flick industrial group, although Kohl refuted charges that he had accepted payments in exchange for favours done to the group. The scandal has been spreading for over two years and over 2,000 people and corporations are under investigation for tax evasion, laundering money and influence buying. It has already led to the resignation of two high ranking politicians, the Economics Minister, Otto Lambsdorff and Bundestag Speaker, Rainer Barzel. After the Chancellor's recent testimony, there was speculation as to how long he and his party could hold out.

To divert attention, Kohl focussed attention on foreign policy. He met his Italian counterpart Bettino Craxi and later visited Washington—the first allied leader to do so after the re-election of President Reagan. In the US, the two leaders reviewed NATO defences, US-Soviet relations and other issues. Kohl's "good friend in the White House" probably wanted to give a boost

...adding, political fortunes. The favour of Kohl's CDU, and according to US officials, if the Flick scandal does topple Kohl, it would give its backing to a CDU Government under a new Chancellor.

Italy

A large-scale operation to clear the country of the Mafia began in October. In one night some 66 suspected Mafiosi in Palermo were arrested, while warrants for the arrest of 140 others were issued. A large number of them were subsequently caught in the police dragnet. The investigators also made inroads into the third level of Mafia, the underworld's top rung where political and business leaders are also involved. Top businessmen like Nino and Ignazio Salvo were implicated, as were Vito Ciancimino, a former Mayor of Palermo and Alessandro Vanni Calvello, the Prince of San Vincenzo.

This major operation followed the detailed testimony of an embittered Mafioso, Tommaso Buscetta, who in recent mob wars had lost most of his family. Yet another member of the Mafia, Salvatore Contorno, also broke the code of omerta, the Mafia's traditional vow of silence. Through them details of the Mafia's internal structure, criminal activities and drug dealing, have been revealed.

However, there were a number of mysterious killings following these revelations. In October, eight young men were killed in a stable at Palermo, one of the largest mass slayings in Sicily's history. Investigators related it to Buscetta's testimony. Families of the magistrates involved in the current investigations have also been threatened and a known Mafia figure was killed in Palermo in mid-November. The killings are apparently done to scare any other mafiosi who may plan to talk.

In another investigation, Judge Ilario Martella revealed that besides the Turkish gunman, Mehmet Ali Agca, who had been convicted for an attempt on the life of Pope John Paul II in St Peter's Square on May 13, 1981, there was a second gunman, a Turk named Oral Celik. The magistrate is a firm believer in the Bulgarian connection as his list of indictments include not only Sergei Antonov, a Bulgarian airlines official who is under house arrest in Rome, but also Todor Aivazov, a Bulgarian embassy cashier and Maj Zhelya Vassilev, an aide to the military attache. It is not surprising, therefore, that there is a chill in Italian-Bulgarian relations.

Cyprus

Another attempt was made to bring the Greek and Turkish Cypriots together on a second round of "proximity talks" held in New York in October. The UN Secretary General Javier Perez de Cuellar tried to mediate between the two leaders who sat in two different rooms. The talks got off to a bad start because President Evren of Turkey published a statement before the meeting saying that northern Cyprus belonged to Turkey, and not "one stone" of this would be given up.

In an earlier round of talks the Turkish Cypriots had proposed that the President's post should alternate between the two communities; that the two lots of Cypriots should

have equal representation in both Houses of Parliament; and that all legislative and administrative measures should require separate communal majority votes. On the question of the size of the Turkish zone, they had offered only a few territorial concessions. The Greek Cypriots had rejected the proposals and both sides came for the second round of talks with more rigid stances. Some US Senators wished to put pressure on Turkey by cutting \$ 270m from its aid package to Turkey, but the US Administration persuaded it to cut only \$ 55m. The Americans are said to be working out a new compromise formula by which the 38% of the island, which the Turks now hold, would be reduced to 30%. The Greek Cypriots will probably not accept it.

European Defence

In late October, the Defence and Foreign Ministers of seven NATO countries met in Rome to convert an outmoded organisation called the Western European Union (WEU), which was set up in 1948 to limit West German rearmament, into a way of stiffening the European half of NATO. The main promoter of the move is France who left NATO's military wing in 1967, but has since been wanting to link its defence industry to the main European market. The West Germans, too, see the WEU as a means of getting rid of the last of the post-1945 controls on their armed forces. Britain, Italy and the three Benelux countries, too, are in favour of the WEU. The US has recently been grumbling that Europe was not doing enough for its own defence and should, therefore, have nothing against the WEU.

Meanwhile, the NATO defence planning committee, made up of the permanent representatives of all its members except France and Iceland, approved a planning document calling on member nations to include a new generation of conventional weapons in their future defence procurement programmes. NATO's present conventional weapons could stop the first wave of the Warsaw Pact attacks. The newly sanctioned weapons have the capability of locating and attacking enemy forces or installations behind the front lines and therefore pre-empt attack.

Poland

The second half of November was a period of tense suspense for Poland. Father Jerzy Popieluszko, an outspoken supporter of the banned Solidarity trade union and once the butt of the official propaganda machine was kidnapped and murdered. Three members of the security police, a captain and two lieutenants and an accomplice were rounded up for the murder and a public trial began in late December. It is believed that somebody in the upper strata of the official hierarchy was behind the murder.

Gen Jaruzelski has been planning an opening-up with the West for sometime and the priest's murder, despite the government's quick crackdown, upset his plans.

The Greek PM, Andreas Papandreu, visited Poland around the time of the kidnapping and the visit was, therefore, blighted. A junior minister from Britain, Malcolm Rifkind, who visited Poland shortly afterwards, gave an outspoken news conference after laying a

wreath at the priest's grave. Next, the German Foreign Minister Hans-Dietrich Genscher cancelled his much-awaited trip to Warsaw. The Reagan Administration, however, withdrew its opposition to Polish membership of the International Monetary Fund, and this too a day after Andrzej Gwiazda, a former deputy leader of Solidarity, was unfairly rearrested for participating in a demonstration along with 3,000 others on Dec 16. At the same time, the US has not lifted its ban on new government credits to Poland or its suspension of a most-favoured-nation treatment for Poland's trade with America. Jaruzelski would, perhaps, like to show less rigidity but his problem is that he feels it is necessary to mollify his hardline critics within the Communist Party.

US, CENTRAL & LATIN AMERICA USA

The major news from the US this quarter is that President Reagan was re-elected to the top executive office with a thumping majority in which he carried all states except one and the District of Columbia. At a Press conference he said that he had won because "voters approved of the fact that the economy is expanding". Cutting taxes and reducing the size of the government is obviously popular with the Americans.

Shortly after his election victory, however, the deficit issue re-emerged as the pre-eminent cause for alarm. The government's economic data for the third quarter of 1984 was none too good either. The Commerce Department reported that the nation's economic output grew by only 1.9% which is sharply below an earlier estimate. Corporate profits and housing stats were down, and some retailers were nervous about a stall in the consumers' Christmas spending. The foreign trade deficit, on the other hand, rose. There is some speculation that the federal deficit for 1985 may be even higher than the \$210b, predicted in late November by Budget Director, David Stockman.

In another field, however, the US scored yet another high. In an eight-day salvage mission, American astronauts captured two errant satellites, Palapa and Westar II and deployed two new ones. This is a significant step forward because it has now been proved that costly communication equipment can be retrieved and space workers can handle unwieldy loads with little trouble. This will help NASA when it embarks on its programme of setting up permanent stations in space.

US - Central America

Last April, the Sandinista Government of Nicaragua filed charges in the International Court of Justice at The Hague against the US that the latter was "directing military and paramilitary actions", designed to overthrow or destabilise the Sandinista Government. In December, the World Court overruled arguments that it had no jurisdiction over cases involving armed conflict and voted to hear Nicaragua's complaint. The ruling raised the possibility that Nicaragua could win a favourable decision on its demand for hundreds of millions of dollars in damage.

In another embarrassing episode, a handbook

for guerilla warfare — courtesy CIA — solicited in Washington, in October. It was a clear violation of presidential orders and a federal law against US-sponsored terrorism. Reagan's aides announced two investigations of the manual, one by the President's Intelligence Oversight Board and the other by the CIA Inspector General John Stein. Several middle-level officials in the CIA refused to take the blame for the manual which urged "selective use of violence" to neutralise leftist Sandinista officials in Nicaragua. They said that they refused to be scapegoats for higher CIA officials. The CIA Inspector General reported that no violation of law had occurred; it was only "poor judgment and lapses in oversight at lower levels".

War jitters were felt in Central America when the Soviet ship Bakuriani neared its destination of the Nicaraguan port of Corinto. The US officials felt that the ship was carrying sophisticated MiG aircraft to Nicaragua. One senior official warned that the Reagan Administration was prepared to use military force to prevent Nicaragua from "tipping the military balance" in America.

The Sandinista Government put Nicaragua on full alert against possible US invasion. The crisis, however, subsided shortly as reporters who had observed the unloading in Corinto were unable to spot any container large enough to hold a MiG fuselage and Stevedores reported that the Bakuriani had brought in only a number of high-speed patrol boats.

Belize

Belize, formerly British Honduras, became independent in 1981 and Britain hoped to withdraw its troops by the end of 1982. But they are still there, and with Belizian sanction. At the general elections held on Dec 14, George Price's People's Party was beaten by Manuel Esquivel's United Democratic Party which secured 21 of the 28 seats in the Parliament. Esquivel believes that Belize has more in common, culturally and democratically, with the Commonwealth countries of the Caribbean and is against cultivating relations with Belize's violence prone Central American neighbours. Price, who had been PM since 1964, had been on close terms with the US, but Esquivel is in favour of distancing himself from the US, except for economic purposes.

Belize's greatest problem is Guatemala, which says that Spain and not Britain used to own Belize and therefore it inherited the country from Spain. Guatemala says that it would call off its threats to invade and recognise the independence of Belize, if it is given one-third of its territory. Belize, which is only 170 miles long, and has a population of 128,000, is not likely to comply. Therefore, the 1,700 British soldiers who are quartered there can stay.

Mexico

In late November, the Petroleos Mexicanas (Pemex), the liquid gas storage and distribution site in Mexico City suburb of San Juan Ixtatepec, exploded in the city's worst ever disaster. Shortly after the incident, rescue workers estimated that over 400 had died, 2,000 had been injured and 1,000 others were missing. Hardly a family had been untouched and at least 600 orphans had been created in the poverty-

stricken working class neighbourhood. Residents of the area reported that the ever-present smell had increased in the last few days, but the actual cause of the blast was uncertain.

Grenada

Just 13 months after the Americans invaded Grenada, the country held its elections. The centrist New National Party (NNP) which has the support of the US, swamped both the right and the left-wing Opposition and captured 14 of the 15 parliamentary seats, securing 57% of the vote. The new PM is Herbert Blaize who defeated his chief rival, the former PM, Sir Eric Gairy, whose dictatorial rule had led to a Marxist coup which had ultimately sparked off the American invasion. Gairy claimed that the election was a fraud and the Americans had used disappearing ink, so that the marks vanished from the ballot paper and new marks against the names of NNP candidates appeared mysteriously. The sole winner from the right wing Opposition threatened to resign.

Blaize's victory does not mean the end of American control over the island. Immediately after taking office, Blaize wrote to Reagan asking that the 250 American troops still there should remain indefinitely. He also wrote to the heads of seven other Caribbean nations, requesting that the 400-man Caribbean Peace Keeping Force should stay on at least till March. Grenada faces a shattered economy, unemployment rate is at 30%, and many of the unemployed are still sympathetic to leftist ideas. Under the circumstances, Blaize feels that Grenada can ill afford political trouble.

El Salvador

On Oct 8, President Jose Napoleon Duarte had proposed at the UN that the El Salvadoran Government should meet for talks with the guerilla Opposition. Accordingly, the two groups met at the La Palma parish church on Oct 15. They agreed to humanise the civil war and form a commission to explore ways of ending it. However, the two have a long way to go. Duarte made it clear that he would not budge from his previously stated view that the guerillas would have to lay down their arms and take their chance in the elections. The guerillas, on their part presented 29 proposals, which included punishment for those responsible for political murders, the restoration of the land reform programme, a pay cut for army officers and an increase for those they command.

In the second round of talks held on Oct 30, in a church in Ayaguayo, the hopes of a compromise settlement receded further. The guerillas headed by Puben Zamorra, proposed a three-stage trek towards peace: a national forum would be set up to discuss the future of El Salvador, human rights would be guaranteed and the far-right death squads would be dismantled; then, an agreement would be worked out in a government which would include representatives of "all political and social forces", and which would recognise the guerillas' hold on areas they control — only then, would the guerillas agree to a ceasefire; and finally, the new government would be installed and the armed forces "reorganised", after which an election would be called, presumably to rubber-stamp the new government. Duarte

himself, backed the plan. The talks will, however, go on.

In between the two talks, one of the best combat officers of the El Salvadoran Army was killed while directing operations near the Honduran border. While the government claimed that he had died in a helicopter crash, the guerillas declared that he had been shot down by the Opposition machine-gunners.

Nicaragua

General elections were held in Nicaragua on Nov 4, which confirmed the Sandinistas in office. Censorship of the only Opposition newspaper, *La Prensa*, which was relaxed before the elections, was reimposed shortly afterwards. In the post-election period, church-state relations too suffered when the Jesuits expelled Father Ernesto Cardenal from their order. He was one of the four senior priests who had rejected Article 285 of the church's new Canon Law, which rules that no priest may hold a high state office. Further, restrictions on travel were clamped down after the elections; about 30 people, mainly Opposition members, were refused permission to leave the country. These included Mario Rappacoli, the leader of the Conservative Party, Alvin Guthria, the main non-Sandinista trade union chief and Enrique Bolanos, the head of the private enterprise association.

The 'dialogue' between Sandinistas and some non-Sandinistas also collapsed in early December, because the two sides failed to agree on an agenda. Outside the country, the Contadora group's (Colombia, Venezuela, Mexico and Panama) peace process is also stagnating. The Sandinistas had accepted their draft treaty of September which had presented proposals on free elections, economic co-operation and arms reductions, but so far nothing has come of it.

Uruguay

After 11 years of military rule, the generals held an election in which Julio Maria Sanguinetti's centrist Colorado Party won a 39% plurality. It was the fifth military ruled country to elect a civilian government in the region since 1979. However, Sanguinetti assured the military that they would have an advisory role in national security matters. The military also retains emergency powers in the event of a resurgence of guerilla activity. Although his opponents complain that Sanguinetti is an accommodationist, he has a reputation for pragmatism and independence. After his election he said that he hoped to restore diplomatic relations with Cuba and added that he would make Uruguay non-aligned. Provided the military does not break its promises, he will take over as President in March.

Chile

Chile, on the other hand, retreated to repression. In the most sweeping crackdown since the 1973 coup, that brought Gen Augusto Pinochet and his military junta to power, more than 5,000 people were detained and neighbourhoods like Ra Victoria and Raul Silva Henriquez were sealed off and houses

searched. In early November, Gen Pinochet placed Chile under a state of siege in order to safeguard liberty. He insisted that the new crackdown was necessary to combat a Marxist insurgency in Chile. He muzzled the Opposition Press and banned unauthorised public meetings. The government was given the legal power to tap telephones, open mail and hold prisoners indefinitely, without charges.

The actual trouble is that the people have been pressuring the government to return to civilian rule soon. Chile's controversial four-year-old Constitution, endorsed by Pinochet's Government, calls for a limited return to civilian rule by 1989 when it proposes to hold presidential elections. But in early November, there was an unsuccessful, nationwide strike, a series of bombings and dozens of stores were looted. Pinochet responded with the declaration of a siege. The people retaliated with defiant protest demonstrations which were fired upon. Washington has called on Chile to speed up a return to civilian rule, but so far there has been no response.

On the diplomatic front, however, matters were somewhat better. Argentina and Chile agreed to end their quarrel over three islands, Picton, Lennox and Nueva, in the Beagle Channel at the tip of Tierra Del Fuego. While the Chileans will get the islands, the Argentinians will have oil and mineral rights on part of the continental shelf to the south and east. The Argentinians backed the treaty massively in a referendum and it was duly signed in Rome on Nov 29.

USSR & EAST-WEST

USSR

At a special meeting of the Soviet Communist Party's Central Committee, the party leader Chernenko revealed that the Soviet Union had suffered its fifth calamitous harvest in a row. According to Western analysts the grain harvest amounted to only 170m tonnes, 70m tonnes less than the goal and 20m tonnes below last year's production. Chernenko put the blame on bad weather and, as a remedy, outlined a scheme to add about 40m acres to the Soviet Union's supply of arable land by draining swamps and irrigating desert areas. Khrushchev had tried such a plan earlier in the 1950s and 1960s, but it had failed.

Chernenko's heir apparent, Mikhail Gorbachov who has supposedly supervised the farms on the party's behalf for the last four years, is perhaps not in favour of Chernenko's plan. He stated in last March that bad weather and shortage of land were not Russia's problem; it was poor management, bad storage and bad distribution. He advocated such reforms as organising farm workers into brigades whose pay would depend partly on how much they produced.

However, the bad agricultural front and the apparent overruling of his plans did not affect Gorbachov's position in the party. His visit to Britain in December was extensively covered in the Soviet Press and the Soviet TV gave more air time to him than is given to Politburo members travelling abroad. Western analysts also feel that he has taken over the Politburo's ideology portfolio, a position that both Andropov and Chernenko held before taking over the top



job in the Kremlin, because recently he delivered the main address at a Communist Party conference on ideology.

Among other important events, the Soviet Defence Minister, Marshal Dmitri Ustinov, the first civilian to head the Soviet war machine, died in late December. He was succeeded by Marshal Sergei Sokolov, a First Deputy Defence Minister. In another development, Svetlana Alliluyeva, Joseph Stalin's daughter, who had defected to the US in 1967 returned to Russia and was granted Soviet citizenship. She was accompanied by her daughter, Olga, born of a marriage with an American architect, William Wesley Peters. In Russia, she held a Press conference in which she stated her disillusionment with the Western world.

East-West

After a meeting between Soviet Foreign Minister, Andrei Gromyko and President Reagan, in Washington, in late September, in which Reagan sounded very temperate and Gromyko looked impassive, the two world powers decided to resume talks in Geneva on Jan 7 and 8. Gromyko and the US Secretary of State, George Shultz settled to meet to revive the nuclear arms talks which had been stalled as a result of a Soviet walkout over the Geneva talks on Strategic Arms (START) and on Intermediate-range Nuclear Forces in Europe (INF). One important field for negotiation was likely to be space weapons. In December, Politburo member Gorbachov, on a tour of Great Britain, traded rhetorical salvos with US officials over Washington's plan to develop space-based anti-missile systems and anti-satellite weapons. In the US, the Press leaked news of a secret spy satellite which was to be launched by the next US space shuttle (launched in Jan '85). And the Soviet Union too staged a test of its own space shuttle. Gorbachov said that it would be unreal to think of a 'imitation of the arms race without a ban on space weapons. He added that if the US goes ahead with its 'Star Wars' programme, the Soviet Union would match those efforts.

AFRICA

Kenya

President Daniel Arap Moi pardoned a former adviser, Charles Njonjo, just after the publication

Beating retreat: France withdrawing its troops from Chad.

of a 95-page catalogue of Njonjo's alleged misdeeds as revealed during a judicial inquiry. Among these were an allegation that he had dealings with South Africa and that he had lent support to an abortive coup attempt led by South African mercenaries against President Albert Rene of the Seychelles. He also allegedly misused funds belonging to the Association of the Physically Disabled of Kenya and diverted donations towards development projects, in his Kikuyu constituency, into his personal account.

Moi also released four of Kenya's seven political detainees and raised the minimum wage after a gap of two years. He appears to be courting the Kikuyu peasant farmers who supported the Mau Mau guerillas during colonial times. Moi probably regards the Kikuyu middle-class, with whom Jomo Kenyatta built Kenya, as his political challengers and is now building up the Kikuyu grassroots.

Zimbabwe

PM Robert Mugabe has repeated often enough that he wants to set up a one-party Marxist state by merging the Opposition ZAPU, led by Joshua Nkomo with his ruling ZANU. But in early November he broke up the coalition he had formed at the time of independence in 1980, by sacking the last two ZAPU ministers still in his Cabinet. He still has one ZAPU member as a deputy minister.

The sacking was the fallout of the assassination of a ZAPU Senator, Mwenemutema, on Nov 9. Rebels who claim to support Nkomo, but are publicly disavowed by him, have been blamed for the killing. Mugabe may have dismissed his ZAPU ministers in order to appease hardliners in his party who wish to ban ZAPU outright. However, by doing this he has put the ZAPU's back up.

OAU

The 20th summit conference of the Organisation of African Unity (OAU) was held in Addis Ababa in November. The only point of agreement was the matter of denouncing the racist regime in South Africa. But the presence of delegates from the Algeria-based government-in-exile, of the former Spanish Sahara, the

to major dissensions and Morocco and Zaïre withdrew from the organisation. The Polisario guerrillas of SADR have been resisting Morocco's occupation of the territory for nine years and Morocco on its part has been keeping it out of the OAU. The issue had led to the cancellation of the 1982 summit and the 1983 one could be held only because the Polisario had agreed to stay away.

South Africa

The success of the general boycott called by the black labour unions of the South African elections, held in August, led to a heavy handed response from the government. On Oct 23, 7,000 troops sealed off three black townships south of Johannesburg and searched the houses of 2,25,000 people. The purpose was to get rid of revolutionary elements in the townships of Sebokeng, Sharpeville and Boipatong. Later in December President Botha set free 27 of the 49 trade union leaders that he had arrested over the past year. But shortly afterwards, he charged 11 of the newly released leaders with subversion or treason, which can lead to death penalty.

This kind of repression has led to a politicisation of the black trade unions, and the white businessmen fear the creation of a kind of black solidarity movement in South Africa. Union membership is still less than 7% of the total black workforce, although in some industries it includes most of the skilled workers. There are also some new political movements, which, in the government's view, are trying to create a "revolutionary climate". Two new political alliances—the United Democratic Front (UDF) and the National Forum—express black nationalist sentiment of a type not expressed since the main black parties were outlawed in early 1960s and mid 1970s.

The news on the diplomatic front was both good and bad. According to an agreement signed in Pretoria on Oct 3, the South Africans and Angolan governments agreed to keep the peace together in southern Angola. As a result, the border provinces used by guerrillas of the South-West Africa People's Organisation (SWAPO) have been sealed off from Namibia which SWAPO seeks to wrench from South Africa. With the guerrillas subdued, South Africa has been given a chance to show whether it is serious about giving independence to Namibia.

Meanwhile, Bishop Desmond Tutu was selected for and received the Nobel Peace Prize in Oslo. He visited Washington before going to Oslo and said that the Reagan Administration's friendly relations with Pretoria have worsened the situation of blacks in South Africa. He set off a round of pickets and demonstrations against South African embassies and consulates over the country. Although Reagan said that he "disagreed with the Bishop", later during a speech on the International Human Rights Day, he conceded that sometimes his own preference for quiet diplomacy is "not enough". Tutu had asked the US to follow a tougher economic line against Pretoria.

Libya, France and Chad

It was *faux pas* time for Libya, but France too lost some face over Chad. In November, the Tripoli radio announced that Gaddafi's hit

man had executed former Libyan PM Abdul Hakim Bakouche in Cairo for having sold his conscience to the enemies of the Libyan people. But the Egyptian Government let out immediately afterwards that its security forces had cleverly foiled the plot and Bakouche was alive and well at Aswan. The lesson was that the world knew that Libya's hit teams were very much active, but that they were not so efficient that the Egyptians could not score over them.

France, on the other hand, lost face when it pulled out its troops from Chad after a mutual Franco-Libyan troop withdrawal agreement signed in September. US reconnaissance planes, however, showed that the Libyan troops were still there. The embarrassing disclosure came just when President Mitterrand and Gaddafi were meeting at the first Franco-Libyan Summit in 11 years, in Crete.

Later, however, France tried to save face during the annual French-African summit held in late December, in Bujumbura, the capital of Burundi. Libya and France informally agreed to roughly divide Chad into two parts at the 16th parallel although talks about a Libyan evacuation would continue. If Libyans cross the 16th parallel, Paris says that it is ready to send its troops back to Chad.

Many of the African leaders, including Chad's President, Hissene Habre, were not happy with the new arrangement. Five leaders from the 20 French speaking African countries chose to stay away and the Presidents of Ivory Coast and Niger decided instead to go to Washington to talk to President Reagan about a wider US role in French west Africa. Mitterrand, however believes in a carrot and stick policy—the carrot being a resumption of arms sales to Gaddafi once all Libyan troops leave Chad. On the stick side is a statement that "the military option has not been excluded".

African Famine

Nearly 30 countries including Mozambique, Mauritania, Sudan, Niger, Kenya, Mali, Chad, Zambia, Zimbabwe, Botswana, Angola, the Central African Republic, Tanzania, Senegal, Morocco and Burkinafaso, have been listed as officially hungry. The worst hit state is Ethiopia, where 3,00,000 people have died of starvation and a million more may follow suit before the end of the crisis. This time the international agencies and Western governments were slow to respond to the cries of famine in Ethiopia and the Soviet Union, too, has responded so far with only 70,000 tons of rice. But the Ethiopian Government itself played down the impending tragedy and spent \$200m on sprucing up the country for the 10th anniversary of its rise to power. However, the Ethiopian leaders blamed the extent of starvation on the slow response of the Western nations during a conference with food donors at Addis Ababa.

According to a recent World Bank report on 24 African countries which have not had enough food in 1984, food production per person is now in long-term decline, drought or no drought. As such, even if there is a good harvest, say in 1988, no more food will be grown per person than in this year's famine. The spectre of famine will, therefore, haunt Africans for a long time. As a result of famine in certain areas, refugees have moved into other African countries. Many countries like Nigeria have, therefore, officially closed their borders to them.

WEST ASIA

Israel

PM Shimon Peres visited the US early October. The US Congress had already decreed that Israel should be given \$2.6b in the fiscal year which began in October as a straight grant. During his visit, the Reagan Administration agreed to give him \$1.2b of economic aid at once, instead of in the usual quarterly disbursements. However, more money was necessary, and an Israeli economic delegation went to Washington in December to ask for more. The Reagan Administration made it clear that Israel would not be given more aid unless it imposes a much more drastic austerity programme than it so far has.

The Labour Party of Peres also ran into trouble at home. The row was over two small religious parties: the National Religious Party which is a protegee of the Labour Party and the Shas Group, which has the backing of the Likud. When the Labour-Likud coalition was created in September both parties had given assurances to their proteges that they would be given the Interior and Religious Affairs ministries. Nothing was done and on Dec 16 the Shas announced their resignation, only to call it off two days later saying that it would settle for the Interior Ministry, if the budgets of local religious councils could be agreed upon by the Interior and Religious ministries acting together. While Labour protested, the Likud leader, Yitzhak Shamir said that if Shas resigned, the Likud would follow. This would leave Peres at the head of a minority government which would probably not last long.

Egypt

President Hosni Mubarak, on a visit to France in October, said that peace talks between the Arabs and Israelis could start again soon. Perhaps as a follow up, Israel's ambassador to Cairo met the Egyptian PM in early November.

The Jordanians are, however, pessimistic about a settlement with Israel because they feel that there is no common ground among the Arabs about the terms of a peace deal, let alone between the Arabs and Israel. Notwithstanding such sentiments, the Jordanians resumed diplomatic links with Egypt in October, ending a five year breach between the two countries. Saudi Arabia's Oil Minister, Sheikh Yamari, also visited Cairo in October. The significance of all this is that Egypt is gradually returning to the Arab fold, which had rejected it after the Camp David agreement which was worked out between Egypt, Israel and the Carter Administration in 1978-79.

Despite these diplomatic victories, Mubarak faced the worst outbreak of violence since he came to power. What triggered it off was an increase in the price of bread and other government subsidised items. In the riots that followed one person was killed and 25 injured. Under such pressure, Cairo backed down and rolled back bread, macaroni and cooking fat prices in all working class neighbourhoods. Egypt has chronic economic problems, increased by a rapidly growing population. It now imports 65% of its food. It has a galloping inflation of more than 20% and has a \$19b foreign debt. It appears, however, that the people are not ready

(Continued on page 59)

Quantitative Aptitude

BY KAVITA KAPOOR AND B.L. ARORA

FOR PO, CDS, NDA EXAMS

This section is designed to help those appearing in the forthcoming BSRB (PO) exam. For the NDA and CDS exam-takers, it forms an important part of their Mathematics paper.

DIRECTIONS: For each question, tick mark the choice that best answers the question. Answers with explanations appear at the end of this test.

- The average of the first 20 even numbers, starting from 2, is
(a) 20 (b) 21
(c) 19 (d) 20.5
- The least number, which when increased by 5, is divisible by 6, 7, 8 and 9, is
(a) 499 (b) 509
(c) 504 (d) 512
- There are _____ numbers between 100 and 400 which are divisible by 11.
(a) 36 (b) 33
(c) 27 (d) 26
- _____ cubes of length 0.5 cm are contained in a cube of length 2 cm.
(a) 8 (b) 16
(c) 32 (d) 64
- 18.2% of $\frac{3}{7}$ is
(a) .546 (b) .78
(c) 5.46 (d) .078

Statement for questions 6 to 8:

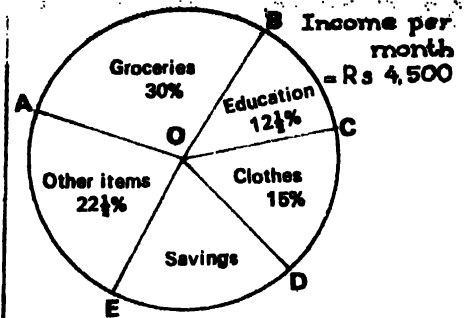
Odd numbers from 1 to 9 are represented by the vowels a, e, i, o, u respectively; even numbers by the letters following these in the alphabet; and z represents zero.

- 14^2 will be represented as
(a) aup (b) aoj
(c) auj (d) baj
- $bji + eup$ equals
(a) ije (b) jje
(c) jef (d) ioe
- _____ is a prime number.
(a) aae (b) uaz
(c) pae (d) alib
- A man purchased a radio listed at Rs 750 at two successive discounts of 20% and x%. If he paid Rs 528 for it, x's value is
(a) 10 (b) 12
(c) 14 (d) 15.5
- _____ set of fractions is in ascending order.
(a) $\frac{5}{12}, \frac{7}{15}, \frac{3}{5}, \frac{4}{7}$
(b) $\frac{7}{15}, \frac{5}{12}, \frac{4}{7}, \frac{3}{5}$
(c) $\frac{5}{12}, \frac{7}{15}, \frac{4}{7}, \frac{3}{5}$
(d) None of the above
- $(-27)^9$ equals
(a) $(3)^{-27}$ (b) $(-3)^{27}$
(c) $(-3)^{18}$ (d) 3^9

- $(-4)^4 \times (-16)^2$ equals
(a) 4^{10} (b) $(-4)^{24}$
(c) 16^{10} (d) $(-4)^{10}$
- The value of $(315)^2$ is
(a) 98,225 (b) 99,125
(c) 99,225 (d) 99,725
- The compound interest on Rs 4,500 for $1\frac{1}{2}$ years at 15% per annum will be
(a) Rs 1,012.50
(b) Rs 1,063.12
(c) Rs 1,088.25
(d) Rs 1,113.30
- A person has to pay 25% income-tax on his taxable salary and 10% surcharge on the income-tax so calculated. If the total amount he pays is Rs 1,980, his taxable salary is:
(a) Rs 7,200 (b) Rs 7,600
(c) Rs 8,000 (d) Rs 8,200
- Rs 850 invested at 12% per annum compound interest would yield an interest of Rs 216.24 after _____ years.
(a) $1\frac{1}{2}$ (b) $1\frac{1}{4}$
(c) 2 (d) $2\frac{1}{4}$
- The value of $\sqrt{\frac{65.32 \times 36.47}{24.95}}$ is
(a) Less than 9.5
(b) Slightly more than 10.7
(c) Nearly 10.3
(d) Slightly more than 9.6
- 73.25×0.152 nearly equals
(a) 0.036 (b) 309
(c) 3.07 (d) 3057
- In 24 minutes, the hour hand of a clock moves through
(a) 60° (b) 24°
(c) 12° (d) 5°
- If 2 boys do $\frac{1}{3}$ of a work in 3 days and another boy does $\frac{1}{4}$ of the work in 4 days, all 3 can finish the work in _____ days.
(a) 1.8 (b) 2.4
(c) 2.8 (d) 3

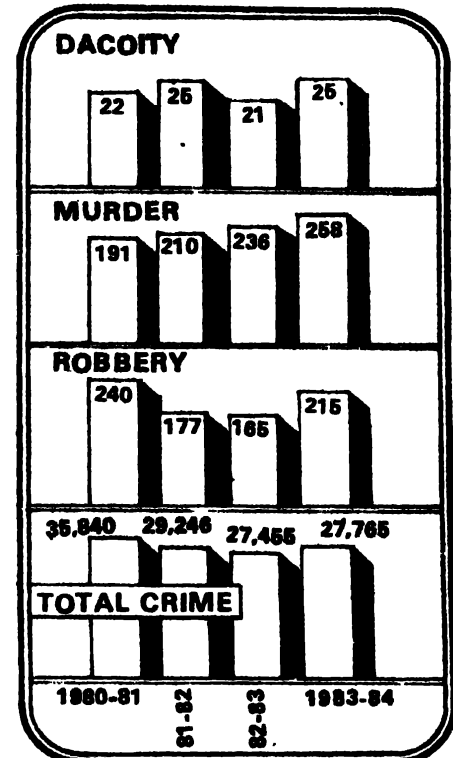
Note: Questions 21 to 24 are based on the following diagram.

- A family's expenditure on various items is shown in the diagram. The family's annual



savings would be

- (a) Rs 10,800 (b) Rs 8,400
(c) Rs 10,400 (d) Rs 7,650
 - Angle BOC is equal to approximately
(a) 45° (b) 56.25°
(c) 60° (d) 66.25°
 - The expenditure on clothes is _____ % more than that on education.
(a) 2.5 (b) 16
(c) 20 (d) 22.5
 - Money spent on other items is _____ less than that spent on groceries.
(a) Rs 287.50
(b) Rs 317.50
(c) Rs 337.50
(d) Rs 343.50
- The crime situation in Delhi during the period 1980-81 to 1983-84 is given in the chart below. Answer questions 25 to 27 by carefully studying the chart.
- During 1981-82, the maximum percentage change as com-



- occurred in
(a) Dacoity (b) Murder
(c) Robbery (d) Total crime
26. As compared to 1980-81, the total crime in 1983-84 was nearly — % less.
(a) 30% (b) 24%
(c) 22.5% (d) 20%
27. The maximum percentage change in robbery took place during
(a) 1981-82
(b) 1982-83
(c) 1983-84
(d) 1981-82 and 1983-84
28. A worker gets twice his monthly salary every June and December. The fraction of the yearly income he gets in June is
(a) $\frac{2}{13}$ (b) $\frac{1}{14}$
(c) $\frac{1}{7}$ (d) $\frac{2}{12}$
29. The area of a square is $4X$. The length of a diagonal of the square would be
(a) $2\sqrt{2X}$ (b) $2\sqrt{2} X$
(c) $\sqrt{2X}$ (d) $\sqrt{2} X$
30. The ratio of the lengths of the largest rods that can be kept in a cube of length 2m and on a square of side 2m is nearly
(a) 2 (b) 1.6
(c) 1.2 (d) 1.1
31. After 11 years, a man, now 28, will be three times his son's age. The son's present age is — years.
(a) 4 (b) 3
(c) 2.5 (d) 2
32. $\frac{\sqrt{24}}{3}$ equals

- (a) $2\sqrt{\frac{2}{3}}$ (b) $2\sqrt{\frac{1}{3}}$
(c) $4\sqrt{3}$ (d) $2\sqrt{3}$
33. The average age of 4 members of a family is 25 years. The average age increases by 20% if the age of the head of the family is included. The age of the head of the family is — years.
(a) 30 (b) 40
(c) 45 (d) 50
34. The minimum value of the function $x^2 + 5x + 8$ is
(a) 8 (b) $\frac{1}{4}$
(c) $\frac{1}{4}$ (d) Zero
35. The value of the above function is minimum for $x =$
(a) $-\frac{5}{2}$ (b) $-\frac{5}{4}$
(c) $\frac{5}{2}$ (d) $\frac{5}{4}$
36. A housewife purchased 8 eggs @ Rs 6.60 a dozen and 2.5 kg of sugar @ Rs 5.50 per kg. If she gives Rs 50 to the shopkeeper, she would get back
(a) Rs 31.85 (b) Rs 33.15
(c) Rs 32.25 (d) Rs 30.70
37. $\frac{\sqrt{3}}{7}$ is equal to approximately
(a) .217 (b) .241
(c) .247 (d) .263
38. If $\sqrt{5}$ is approximately 0.707, the value of $2\sqrt{45}$ nearly equals
(a) 4.242 (b) 4.248
(c) 6.308 (d) 5.832
39. The length of a rectangle is increased by 50%. To keep its area constant, its width must be decreased by
(a) 50% (b) 33 $\frac{1}{3}$ % (c) 25%

- on the rectangle's length
40. If the side of a square is increased by 25%, the length of its diagonal will nearly increase by
(a) 25% (b) 35%
(c) 18% (d) An amount which depends on the length of the square
41. $\frac{1}{2}$ cm is used to represent 1.5 km on a map drawn to scale. Then, the actual distance between two cities $\frac{1}{10}$ m apart on a map is
(a) 15 km (b) 30 km
(c) 0.15 km (d) 300 km
42. Four litres of milk A (80% milk + 20% water) and 6 litres of milk B (75% milk + 25% water) are mixed together. The resultant product would be a — % mixture of milk and the rest water.
(a) 77.5 (b) 77
(c) 78 (d) 76.5
43. A 20% solution of sugar in water contains 20 gm of sugar in 100 cc solution. From 20 cc of this solution a 10% sugar solution can be obtained by adding — of water to it.
(a) 12 cc (b) 16 cc
(c) 20 cc (d) 40 cc
44. An investor gets 12 $\frac{1}{2}$ % interest on his investment per annum. If the amount (investment and interest) he receives after a year is Rs 8,000, his investment was approximately
(a) Rs 6,000 (b) Rs 6,750
(c) Rs 7,200 (d) Rs 7,111



PRICELESS NONSENSE

Johannes Wirtl, a young German, has earned the dubious distinction of inventing the most perfect piece of technical nonsense. He designed and built what he called PWM (Paper Wadding Machine) which types a letter, stamps it, postmarks the stamp and after wadding the letter up, throws it straight into a waste-paper basket. This technical wonder measuring 3m in length and weighing 800 lbs, took two years and a considerable amount of technical creativity to be made. Mercifully not many can afford a priceless trash like this—for it is valued at around 50,000 marks.

ANSWER KEY

1. (b). The average is $\frac{2+4+6+\dots+40}{20} = \frac{2(1+2+\dots+20)}{20} = \frac{2 \times 20 \times 21}{2 \times 20} = 21$.
2. (a). The LCM of 6, 7, 8, 9 is 504. The required number is, therefore, $504 - 5 = 499$.
3. (c). The smallest number between 100 and 400 divisible by 11 is 110 and the largest is 396. $\frac{110}{11} = 10$ and $\frac{396}{11} = 36$. The quotients obtained would thus lie between 10 and 36 and would be 27 in number.
4. (d). Volume of bigger cube $= \frac{8}{1} = 64$.
Volume of smaller cube $= \frac{1}{8}$.
5. (d). $\frac{18.2}{100}$ of $\frac{3}{7} = \frac{7.8}{100} = 0.078$.
6. (c). $14^2 = 196$ will be represented by auj.
7. (b). $bji + eup = 265 + 398 = 663$, which will be represented by jje.
8. (a). $aaa = 113$ is the only prime number.
9. (b). The first discount of 20% = Rs 150. This brings the price to Rs 600. $x\%$ of Rs 600 = Rs 72 ($=$ Rs 600 - Rs 528) $= x = 12$.
10. (c).
11. (b). $(-27)^3 = (-)^3 \cdot (3^3)^3 = (-3)^{27}$.
12. (d). $(-4)^4 (-16)^3 = (4)^4 (-4^3)^3 = -(4)^4 \times (4)^9 = -(4)^{13}$.
13. (c). The square of numbers ending in 5 are obtained by writing 25 at the extreme right and $n(n+1)$ to its left, where n is the remaining part of the original number. Thus, in $(315)^2$, $n = 31$ and $n(n+1) = 992$. The answer is 99,225.
14. (b). The interest for the first year is $4,500 \times \frac{1}{100} = 675$, making the amount 5,175. The interest for the next six months is $\frac{5,175 \times 15}{2 \times 100} =$ Rs 388.12. Total interest = Rs (675 + 388.12) = Rs 1,063.12.
15. (a). The amount he has to pay is $25\% + 2.5\% = 27.5\%$ which is equal to Rs 1,980. Thus, his salary is $\frac{1,980 \times 2 \times 100}{55} =$ Rs 7,200.
16. (c).
17. (d). $\sqrt{65} \approx 8$, $\sqrt{36.47} \approx 6$ and $\sqrt{24.95} \approx 5$. The expression is, therefore, slightly more than 9.6.
18. (b). Eliminating the decimals, the expression is equal to $\frac{7,325 \times 152}{3,600}$ which is slightly more than 300. The other figures are much larger or smaller than this.
19. (c). In 60 minutes, it moves through $\frac{360^\circ}{12} = 30^\circ$. Therefore, in 24 minutes, it will move through 12° .
20. (b) Two boy's work in one day $= \frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$. The 3rd boy's work in one day $= \frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$. Their combined work for one day $= \frac{1}{6} + \frac{1}{12} = \frac{1}{4}$. They will complete the work in $\frac{1}{\frac{1}{4}} = 4$ days.
21. (a). Total monthly savings = 20% of Rs 4,500 = Rs 900. Therefore, annual savings = Rs 10,800.
22. (a). $\angle BOC = \frac{12}{100} \times 360^\circ = 45^\circ$
23. (c). The expenditure on clothes is $2\frac{1}{2}\%$ of total income more than the expenditure on education, which is $12\frac{1}{2}\%$ of income. Therefore, required percentage $= (2\frac{1}{2}/12\frac{1}{2}) \times 100 = 20\%$.
24. (c). Amount spent on other items is $22\frac{1}{2}\%$ while on groceries is 30%. The difference is $7\frac{1}{2}\%$ of 4,500 $= \frac{15}{2} \times 4,500 =$ Rs 337.50.
25. (c).
26. (c).
27. (c).
28. (c). The total salary he earns during the year = 14M, where M is the monthly salary. The amount he gets in June = 2M. The required fraction is $\frac{2M}{14M} = \frac{1}{7}$.
29. (a). Each side $= 2\sqrt{X}$. Therefore, diagonal $= \sqrt{2} \times (\text{side}) = 2\sqrt{2X}$.
30. (c). It is the largest diagonal in each case. The ratio is therefore, $\sqrt{\frac{2}{3}} = 1.2$.
31. (d). If the son's age is x , then $28 + 11 = 3(x + 11)$. Thus $39 = 33 + 3x$ or $x = \frac{39 - 33}{3} = 2$.
32. (b). $\frac{\sqrt{24}}{3} = \frac{\sqrt{4 \times 2 \times 3}}{3} = \frac{2\sqrt{2}}{\sqrt{3}} = 2\sqrt{\frac{2}{3}}$.
33. (d). Total age of 4 members = $25 \times 4 = 100$ years. Total age of 5 members = $5x$ ($25 + \frac{1}{5}$ of 25) $= 5 \times 30 = 150$. Therefore, age of the head of the family = 50 years.
34. (c). $x^2 + 5x + 8 = x^2 + 5x + \frac{25}{4} + 8 - \frac{25}{4} = (x + \frac{5}{2})^2 - \frac{9}{4}$ whose minimum value is $\frac{3}{4}$, because the minimum value of the first term is zero.
35. (a). See answer (34). The value of the function is minimum when $(x + \frac{5}{2}) = 0$ or $x = -\frac{5}{2}$.
36. (a). (Rs $6.60 \times \frac{1}{10} +$ Rs 5.50×2.5) = Rs 18.15. Balance = Rs $50 - 18.15 =$ Rs 31.85.
37. (c). $\frac{\sqrt{3}}{7} \cdot \frac{1.73}{7} = .247$.
38. (a). $2\sqrt{45} = 2\sqrt{9 \times 5} = 2 \times 3\sqrt{5} = 6 \times 0.707 = 4.242$.
39. (b). If $(L + \frac{L}{2})(B - x) = LB$ or $LB + \frac{LB}{2} - Lx - \frac{Lx}{2} = LB$; we must have $\frac{LB}{2} = \frac{3Lx}{2}$ or $x = \frac{B}{3}$.
40. (a). Diagonal $= \sqrt{2}L$ where L is the side of a square. Increased diagonal $= \sqrt{2}(1.25L)$. Percentage Increase $= \frac{0.25\sqrt{2}L}{\sqrt{2}L} \times 100 = 25\%$.
41. (b). $\frac{1}{15}m = 10$ cm which will correspond to $1.5 \times 2 \times 10$ km = 30 km.
42. (b). Total amount of milk in the mixture will be $4 \times \frac{80}{100} + \frac{6 \times 75}{100} = \frac{770}{100} = 7.7$ litre.
43. (c). 20 cc of the solution will contain 4 gm of sugar. A 10% sugar solution containing 4 gm of sugar should have a total volume of 40 cc. Therefore, 20 cc of water must be added to it.
44. (d). If the amount is x , then we must have $\frac{9x}{8} = 8,000$. Therefore, $x = \frac{64,000}{9} =$ Rs 7,111 approximately.

ENGLISH

BY THE AARBEEES

FOR POs, CLERKS' GDE, IIT...

This section will be helpful for those appearing in the forthcoming Probationary Officers, Clerks' Grade, SSC Stenographers and IIT (BHU) Entrance exams.

DIRECTIONS: For each of the following questions tick mark the choice that best answers the question. Answers are given at the end of this test.

READING COMPREHENSION

I Read the following passage and answer the questions that follow:

Our whole life is built about a certain number—not a very small number—of primary instincts and impulses. Only what is in some way connected with these instincts and impulses appears to us desirable or important, there is no faculty, whether "reason" or "virtue" or whatever it may be called, that can take our active life and our hopes and fears outside the region controlled by these first movers of all desire. Each of them is like a queen-bee, aided by a hive of workers gathering honey; but when the queen is gone the workers languish and die, and the cells remain empty of their expected sweetness. So with each primary impulse in civilised man; it is surrounded and protected by a busy swarm of attendant derivative desires, which store up in its service whatever honey the surrounding world affords. But if the queen impulse dies, the death-dealing influence, though retarded a little by habit, spreads slowly through all the subsidiary impulses, and a whole tract of life becomes inexplicably colourless. What was formerly full of zest, and so obviously worth doing that it raised no questions, has now grown dreary and purposeless; with a sense of disillusion we inquire the meaning of life, and decide, perhaps that all is vanity. The search for an outside meaning that can compel an inner response must always be disappointing; all "meaning" must be at the bottom, related to our primary desires, and when they are extinct no miracle can restore to the world the value which they reflected upon it.

1. According to the author the number of 'first movers of all desire' is
 - (a) fairly large
 - (b) not large
 - (c) very small
 - (d) small
2. In regard to hopes and fears reason and virtue are
 - (a) not as strong as primary instincts and impulses
 - (b) more important than primary instincts and impulses
 - (c) as important as primary instincts and impulses

- (d) nearly as important as primary instincts and impulses
3. 'Each of them is like a queen-bee...' Here the pronoun *them* refers to
 - (a) things that are desirable or important
 - (b) the faculties of reason and virtue
 - (c) our hopes and fears
 - (d) primary instincts and impulses
4. The word *colourless* in the statement 'a whole tract of life becomes inexplicably colourless' means
 - (a) lacking zeal
 - (b) lacking beauty
 - (c) lacking variety
 - (d) lacking emotion
5. The author suggests that all things have value and meaning only when
 - (a) people are full of zest
 - (b) people are civilised
 - (c) people are free from illusions
 - (d) people are moved by related primary desires

PRECIS WRITING

II Make a precis of the following passage in about 105 words:

One thing, however, which has made modern architecture different in kind from the architecture of the past is also connected with modern industry, particularly with its dependence on power production: namely, the factory system. The actual labour producing the parts of a building is now centred in the factories instead of being left in the hands of the individual workman. At one time the workmen arrived on the site of a proposed building with all their raw materials and the tools to shape them with: stone or timber for the walls, more timber for floors, doors and windows, lime for plastering the walls; and they constructed the building on the spot, manufacturing as they went along whatever was needed in the way of doors and windows, sometimes even quarrying stone, clay or sand on the site. Later, for convenience, the doors and window-frames were made in the builder's joinery-shops, and hinges, bolts and other ironwork made at the local blacksmith's, but even then they were made as needed especially for the occasion. The first important example of what we now call "pre-fabrication"—that is, the manufacture of ready-made building

bricks may have been moulded from clay dug up on the site, but as soon as bricks were in common use (in this country by the end of the 15th century) brick-fields were started to fulfil a permanent demand, and these were the first building-material factories. Since then, factories having become the normal way of making things, the process has been tremendously accelerated. Today a large proportion of building jobs are done in the factory: the windows—probably the metal windows—arrive ready made, so do steel beams and columns, and so do doors and sinks, baths, and all equipment.

From J.M. Richards'

Introduction To Modern Architecture

LETTER-WRITING

III Write a letter on any one of the following topics:

Your father has advised you to take the Indian Civil Services Examination. Write a letter telling him that you would prefer the banking services, giving reasons for your preference.

Or

Write a letter to a friend abroad telling him that India will continue to have stability and progress despite recent happenings.

COMPOSITION

IV Write an essay (in about 300 words) on any one of the following:

1. Violent agitations have no place in a democracy
2. Universal literacy is at best a beautiful dream
3. Pollution as a threat to humanity
4. Post-Indira India

SPOTTING ERRORS

V Spot the errors if any:

1. Many of the teachers availed the
a b
opportunity to take part in the seminar
c
on national integration. No error
d e
2. The danger is great, in proportion
a b
with the mischief that may happen
c
through our too great credulity.
d
No error
e
3. At first rocks were only exposed and
a b
not the plants, and the people travelled
c
on the rocky places that produced the
d
plants. No error
e
4. What terms we shall find which have
a b
not been already exhausted and
c

a bribe paid to keep a matter secret from the public

5. One of the first important men of letters in the United States was undoubtedly Washington Irving. No error
6. Beware of thinking that you own all you possess, and of living accordingly. No error
7. It is indisputable that there must be equal justice for all men, no matter what their religious or political opinions are. No error
8. Let us work in every way possible to provide everybody with the basic necessities in life without which a man cannot be a full human being. No error
9. It is impossible that the allied powers should extend their political system to any portion of either continent without endangering peace and happiness. No error
10. Asked later whether he profited by his dreams the old man showed signs of nervousness and began speaking incoherently. No error

IDIOMS AND PHRASES

VI Mark the correct explanation:

- A dark horse
 - a person who works in a secret manner
 - a little known person who competes successfully against another
 - something which brings disaster to a person
 - a person who keeps his aims and objectives hidden from others
- A false alarm
 - a warning of something bad that does not happen
 - anything which happens before its proper time
 - a misdirection
 - an exaggerated fear
- Hush money
 - money paid to silence an opponent
 - a secret payment
 - money earned illegally

- To keep a stiff upper lip
 - to behave in an arrogant manner
 - to remain courageous and calm
 - to have a threatening expression
 - to refuse to speak
- To be on the rocks
 - to earn great fame
 - to have a clear view of things
 - to be in danger of failing
 - to face acute danger

SYNONYMS

VII Choose the word which is nearly the same in meaning to the given word:

- ARDOUR
 - happiness
 - enthusiasm
 - interest
 - passion
- DISSIPATE
 - disperse
 - distribute
 - divide
 - waste
- INSOLENT
 - insulting
 - wasteful
 - hard
 - difficult
- REMORSE
 - rebuke
 - punishment
 - regret
 - repetition
- WITHER
 - spoil
 - shrink
 - fall
 - pale

ANTONYMS

VIII Select the word which is nearly the opposite in meaning to the given word:

- ABSTINENCE
 - satisfaction
 - self-indulgence
 - excitement
 - passion
- APPARENT
 - cloudy
 - complex
 - uncertain
 - factual
- BIGOTED
 - tolerant
 - democratic
 - flexible
 - open
- DEBASE
 - create
 - generate
 - steady
 - improve
- ECSTASY
 - unhappiness
 - regret
 - grief

VOCABULARY

IX Spot the correct meaning of the italicised word:

- She *expended* all her energy on the new project.
 - wasted
 - spent
 - devoted
 - dissipated
- The children *grinned* as the photographer took their photograph.
 - smiled broadly
 - looked grim
 - showed indifference
 - talked in whispers
- I read his *obituary* in one of the English newspapers.
 - announcement of state award
 - acceptance of military honour
 - notice of death
 - notice of retirement
- She starts feeling *squeamish* as soon as she gets on a bus.
 - extremely excited
 - very nervous
 - terribly afraid
 - slightly sick
- Any relationship between them is bound to be *tenuous*.
 - thin or weak
 - full of tension
 - insincere
 - lasting

DID YOU KNOW THAT...

- India had 229.1 lakh installed spindles in January 1984?
- in 1951, there were only 110 lakh installed spindles?
- India is the leading country in spindles, followed by China (180 lakhs), USA (178.8 lakhs) and USSR (160 lakhs)?
- these spindles supply yarn to the cotton textile industry, to handlooms, to the silk industry, to the woollen products industry, the coir manufacturing industry and the man-made fibre industry?
- total cloth production in 1983-84 was estimated at 1,240 crore metres?
- in 1983-84, India produced 11,140 lakh kg of cotton yarn, 1,500 lakh kg of blended yarn and 960 lakh kg of non-cotton yarn?

★ ★ ★

- milk production in the country in 1983-84 was 360 lakh tonnes and that it is expected to go up by another 20 lakh tonnes in 1984-85?
- Seventh Plan aims to raise milk production to 520 lakh tonnes?
- wool production in 1983-84 was 379 lakh kg and that it is expected to go up to 390 lakh kg in 1984-85?
- egg production in the country was 1,248 crores in 1983-84 and is expected to touch 1,300 crores in 1984-85?
- utilisation of funds for various sectors of animal husbandry in the Sixth Plan till today was between 85 and 99%?

ANSWERS

I 1. (d) 2. (a) 3. (d) 4. (a) 5. (d)

II Dependence on mass production in factories has resulted in a qualitative difference between old and new architecture. Most production now takes place in factories and not at the site of the building. The individual workman has thus no longer the important role of carrying raw material to the actual site and building on the spot. The above difference has come about gradually. Doors, window-frames, hinges, bolts etc came to be made away from the building site in course of time, but bricks were the first item to be prefabricated. Now most building jobs are done in the factory and ready-made building parts are extensively used.

III Letter-writing:

222 Tagore Street,
Civil Lines,
Kanpur.

December 20, 1984

Dear Bob,

Many thanks for your letter of Nov 5. It is true that we have passed through very difficult circumstances during the past months. First the events in Punjab. A few misguided people exploited religion and resorted to terrorism in order to achieve their nefarious ends. The result was widespread violence in which scores of innocent lives were lost. Government had to take stern measures which unfortunately created a psychological and emotional chasm between people who had, for centuries, lived as kith and kin. Even as normalcy was returning and all people of goodwill were hoping to forget the ugly past and start a new era of friendship and amity, insanity once again struck a mortal blow and the late Prime Minister Mrs Indira Gandhi fell a victim to the bullets fired by two of her own security men. What followed was a mass orgy bringing into play the worst savagery in the form of largescale arson, loot and slaughter. Many people thought that India would not be able to survive this crisis and that a period of civil strife and secession was inevitable. Little did these prophets of gloom realise that Indian democracy is both resilient and strong and therefore capable of withstanding any shock. The smooth succession of political power and quick restoration of peace and order has once again proved the soundness of the political institutions in India. The great upsurge of emotion throughout the nation is most likely to be channelled in constructive activities and we are looking forward to a better and brighter future.

I am sure that when you visit India in April you will find a healthy and vibrant nation engaged in vigorous developmental activity.

Loving regards,

Yours sincerely,
Dinesh

(Note: in your examination you are required not to disclose your identity. The address therefore may be:

EXAMINATION HALL

and in place of signature merely 'X' may be written.)

IV 1. Violent agitations have no place in a democracy

Language by definition is a meaningful mode of communication. Words being the basic raw material of language have naturally their own meanings. However, there are times when they acquire a new or added meaning in the sense that people become more acutely aware of the potentiality and significance of their connotations. Violence has always stood for an unpleasant—even pernicious—concept. But it has acquired a much more sinister meaning in the light of what has been happening in our country for some time past. For what is at stake now is our very existence as a united, stable and peaceful nation.

Very often political analysts and sociologists attribute violent

agitations to the absence of necessary channels and safety valves which can let popular unrest and discontent vent itself without causing any injury to the political system or social fabric of a country. It is for this reason that a democratic set-up is assumed to be relatively immune from any sudden and uncontrolled outbursts of an emotional nature. Since we are witnessing in our country repeated acts of communal and sectarian violence, the question naturally arises whether we are a democratic country or not. A moment's thought will convince us that it is not for lack of proper avenues and constitutional procedures that some of the misguided elements are resorting to violence here. It is not unreasonable to infer that there is a conspiracy against the nation by people both inside and outside the country—people who have a vested interest in destabilising and dismembering India.

It should thus be obvious that ideally speaking no violent agitation can be justified in a democracy. From a conceptual point of view democracy and violence are antithetical. One might then wonder how to tackle violent agitations under a democratic regime. There is no easy answer to it. However, it must be maintained that by and large even these agitations have to be responded to in a democratic manner. In a world which is not ideal, use of the coercive power of the state cannot be altogether ruled out for dealing with violence. Care has, however, to be taken that the force used is minimum and that it is treated at best as an evil necessity.

1. (b) 2. (b) 3. (b) 4. (b) 5. (b) 6. (e)
7. (c) 8. (a) 9. (e) 10. (c)
- VI. 1. (d) 2. (a) 3. (d) 4. (b) 5. (c)
- VII. 1. (b) 2. (d) 3. (a) 4. (c) 5. (b)
- VIII. 1. (b) 2. (c) 3. (a) 4. (d) 5. (d)
- IX. 1. (b) 2. (a) 3. (c) 4. (d) 5. (a)

WHEELS WITHIN WHEELS



Courtesy German Features

Here's some good news for senior citizens and the handicapped—in FRG. M.A.N., a West German transport organisation, has developed a system designed to make it easier for people in wheel chairs to get on and off buses. The simple principle calls for bus-stops with raised platforms on level with the floors of special buses. A device fitted to both the bus and the stop ensures that wheel chairs move in and out smoothly and easily.

to cooperate in Mubarak's attempts at an economic recovery through cutbacks in government spending.

Syria

President Hafiz Assad's visit to Russia in mid-October was a bit of a diplomatic setback. Although Russia promised Syria more arms and economic assistance, and had cordial talks with President Chernenko, all this had little political significance to the USSR, which did not publish Assad's speeches in its official Press. The communique published at the visit promised "all round assistance" not only to Syria but "to the other Arab people" — and this, after Syria's claim that it is Russia's chief friend in the Middle East. The communique also spoke of the necessity for unity in the PLO. This may have hurt Syrian sentiments because Syria has been behind the recent blood letting within the PLO. The Russians have not reflected Syrians' invec-tive against Yasser Arafat or Jordan's decision to resume relations with Egypt. Syria, on its part has not supported the Russian demand for an international conference in the Middle East, which is also what Jordan and Egypt want. To make matters worse, on the day Assad left Moscow, the foreign minister of Iraq, Syria's worst enemy, arrived there for talks on Soviet-Iraqi "cooperation and friendship".

PLO

On Oct 15, after a meeting at the Tunis headquarters of the PLO, Yasser Arafat and his supporters in Fatah, the biggest single group in the PLO, called for a meeting of the Palestine National Council, the PLO's "Parliament-in-exile". The Council's meeting had repeatedly been postponed in the past nine months, because of objections by the Syrian Government and by the mainly pro-Syrian groups within the PLO which are against Arafat's leadership.

The meeting began duly in Amman, Jordan on Nov 22, and 257 of the Council's 379 members attended. Arafat got together enough of his scattered irregulars to give him a vote of confidence. Analysts feel that this has made him strong enough to work more closely with Jordan and it counterweights both Syria and Libya, which seek to dominate the PLO.

Iraq

It was a time of quiet diplomacy for Iraq. The Foreign Minister, Tariq Aziz, first visited Moscow and then Washington, in November. Iraq's bettering of relations with the US marked the end of the rift which began in 1967 when Iraq had broken off diplomatic relations with Washington because of its support for Israel in the six-day war. After that, Iraq had placed itself in the radical Arab camp and had improved relations with the Soviet Union. However, with the outbreak of the war between Iran and Iraq, which is still continuing, Iraq began to look for other friends while Saudi Arabia, which is backing Iraq, urged the US to support their ally. The Americans themselves are more worried about an Iranian victory in the region. The Americans

for buying American food and other goods. America's Exim bank has agreed to guarantee a \$ 570m pipeline to carry Iraq's oil through Jordan to the Red Sea. The US now feels that if Iraq is on their side, then an anti-Syrian axis could be developed along with Jordan and Egypt. The recent visit of King Hussein to Iraq added credence to the speculation that Iraq and Jordan would resume diplomatic relations soon.

Hijacking

One of the worst instances of skyjacking occurred in December when flight 221 of the Kuwait Airways took off for Dubai en route to Karachi. The plane was diverted to Teheran. Although the terrorists gradually released most of the 161 passengers on board, two American passengers were killed and several were tortured. The hijackers demanded the release of 17 Shi'ite Muslims jailed in Kuwait for the bombing of the American embassy and other targets a year ago, and at the end of the sixth day said that they would blow up the aircraft. Iranians, however, recaptured the aircraft and freed the survivors.

The fact that Iran had waited for six days before launching the rescue operation, prompted some to think of Iranian collusions. Kuwait has hardened its resolve not to release the 17 convicted Shias and Iraq, Saudi Arabia and the Gulf states have congratulated Kuwait on its firm stand. The US is worried about the Iranian attitude, specially the fact that Iran has shown no wish to extradite the hijackers to Kuwait.

Economic Slowdown

A collective assessment made on the basis of the outlook reports of international agencies in December '84 predicts an overall slowdown of the world economy both in output and trade in the new year. And on the external front non-oil developing countries will continue to face uncertainties although some of them, like India, showed a rather creditable growth performance in 1984. This is because, as a group, these countries face structural imbalances.

The marginal reduction of external imbalance in the developing countries can be attributed primarily to compression of imports and not expansion of exports. In fact, while the current account deficit of non-oil developing countries was \$ 39b, a decrease of \$ 2b, it is expected to increase to \$ 43b in 1985.

Meanwhile, during the past year the International Monetary Fund (IMF) further tightened its conditionality regarding assistance to deficit countries. To top it all the colossal budget deficit of the US is keeping the interest rates at unacceptable levels which is making sustained recovery increasingly difficult.

Viewing all this, the major financial institutions of the world—the IMF, World Bank, GATT and OECD— have stressed the need and importance of significant new initiatives by the industrial powers. And these initiatives could be in the form of enlargement of capital flow to developing countries, unlocking resources for developing countries by broadening the framework for tackling the debt question.

ANUPAM MATHUR, S.B., J.V.A.K., J.S. & P.G.

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INDRAJAL COMICS

AWARDED

The Shikar Samman for 1984-85, carrying a cash prize of Rs 21,000 and a citation to Habib Tanvir, noted theatre personality, for "getting theatre traditions of his mother region, Chattisgarh, recognition... at the international level"; Naresh Mehta, a writer, for his "boldness of experimentation and attachment to tradition". The awards are presented annually by the MP Government.

The Padma Vibhushan, the nation's second highest award, to Prof M.G.K. Menon, Physicist, and Prof N.R. Rao, Director of the Bangalore-based Indian Institute of Science. **The Padma Bhushan** to Bhimsen Joshi, musician, S. Varadarajan, noted scientist and Director of the New Delhi-based Council for Scientific and Industrial Research, and Prof Gurbaksh Singh, Vice-Chancellor of the Delhi University, and 18 others. **The Padma Shri** to film personalities Naseeruddin Shah and Smita Patil, mridangam expert Palghat R. Raghu, Olympian P.T. Usha, World Snooker Champion Om Agarwal, sports commentator Jasdev Singh, trade unionist Ela Ramesh Bhatt and leader of the Maharashtra cooperative movement, R.B. Kumbhar and 36 others. **The Bharat Ratna**, the nation's highest award, has not been awarded for the second successive year.

At the **10 International Film Festival of India (IFFI)** held in New Delhi, Jan 3-17, the **Golden Peacock** for the best feature film jointly to *Ruthless Romance* (USSR) and *The Bostonians* (UK); for the best actor to Carlos Vereza in Brazil's *Memoirs Of Prison*; for the best actress jointly to Vanessa Redgrave and Madeleine Potter in UK's *The Bostonians*; for the best short film to Canada's *Narcissus*; the **Silver Peacock** for the best director to Japan's Sadao Nakajima for his *Appassionata*; for the best direction of a short to Bangladesh's Moshedul Islam for his *Agami*; the **Special Jury Prize** to Hungary's *Passing Fancy* by Gyula Mear.

The 1984 Time magazine Man of the Year Award to Peter Ueberroth, the chief organiser of the 1984 Los Angeles Olympics, for "masterminding a triumph that involved four-fifths of the nations of the globe".

The 1983 UNESCO prize for the teaching of human rights to Prof Felix Armacora of Austria's Vienna University. Armacora, an MP, represented his country in the UN human rights commission, acting as its reporter, vice-chairman and chairman in 1974-75.

The Kalidas Samman Award for 1985, carrying a cash prize of Rs 1 lakh to Kumar Gandharva for his "excellence in musical performance by synthesising tradition with innovation".

APPOINTED

James Baker, the White House Chief of Staff, as the US Secretary of the Treasury, replacing **Donald Regan**, who takes over

Baker's post.

Dr M.S. Sanjeevi Rao, former Deputy Minister for Electronics, as the Chairman of the Electronics Commission. Rao, a defence scientist before entering politics, lost the Lok Sabha elections from Andhra Pradesh.

R.D. Pradhan, Maharashtra Chief Secretary, as the new Union Home Secretary.

R.N. Malhotra, India's Executive Director at the IMF, as the new RBI Governor, replacing Man Mohan Singh, who takes over as Deputy Chairman of the reconstituted Planning Commission.

A.B.A. Ghani Khan Chowdhury, Dalbir Singh and Shrikant Verma, as AICC(I) General Secretaries. Chowdhury, former Railway Minister, is expected to look after the party's front organisations like the Youth Congress(I), the women's wing and the Seva Dal. Dalbir Singh replaces Chand Ram who has resigned while Shrikant Verma, a Rajya Sabha member, was the party's spokesman.

ELECTED

M. Thambi Durai, of the AIADMK, as the Deputy Speaker of the eighth Lok Sabha. Durai, 38, is the youngest to be elected to the post.

Najma Heptulla, of the Congress(I), as the Deputy Chairman of the Rajya Sabha. The Opposition, which wanted the post to go to one of them, boycotted her election and walked out.

Balram Jakhar, speaker of the seventh Lok Sabha, re-elected unanimously to the office by the eighth Lok Sabha. Jakhar is the first to be re-elected to the post.

Kamlapati Tripathi, Congress(I) working President and **Narain Dutt Tiwari**, UP CM, to the Rajya Sabha and the UP Legislative Council respectively, unopposed.

RESIGNED

Dr P.C. Alexander, the Principal Secretary to the PM, on moral grounds following the arrest of three of his personal aides for their

connection with a spy ring.

William Clark, a key and controversial figure during President Ronald Reagan's first term, as Secretary of the Interior. A conservative hardliner, Clark had generated considerable controversy, frequently running foul of moderates in the White House and the State Department.

EDUCATION

The UGC committee on Central universities has recommended a common entrance exam for admission to these varsities. Other recommendations of the committee include: constitution of a Planning Board for planning and monitoring the development of the Central universities, steps to enforce greater discipline, participation of meritorious students in departmental, faculty and academic committees and a change in the structure of student unions.

Review of education policy: The Centre has initiated a comprehensive and in-depth review of the existing education policy. This follows PM Rajiv Gandhi's Jan 6 broadcast in which he made suggestions to transform the educational system. Education Minister K.C. Pant told the Lok Sabha on Jan 24 that the new policy would be considered by the Central Advisory Board of Education. The state governments will be consulted and the exercise is expected to be completed by June.

Periodic review of Central universities: The UGC has decided to set up a machinery to periodically review the academic, administrative and financial activities of the seven Central universities in the country. Initially, such a review will be limited to the Central varsities, but later extended to cover all universities. According to UGC Chairman Madhuri Shah, the objective of the review, to be undertaken every five years, is to monitor the use of development grants and the results they were yielding. The academic programmes will be evaluated to measure the standards of various departments and efforts made to ensure the maintenance standards. The UGC is undertaking

CONGRATULATIONS...

To Col Prithvi Nath, Joint Director, Public Relations in the Ministry of Defence, and a regular contributor to the *Career & Competition Times* for being awarded the Vishist Sewa Medal for distinguished service this year. Belonging to the Sikh Regiment, Col Nath participated actively in the 1965 and '71 Indo-Pak wars and also carried out successful anti-terrorist operations in Nagaland and Manipur. Apart from being an army man Col Nath is a writer too. He has authored the bi-annual publication of the Defence Ministry, *Perspective—An Insight Into National And International Affairs*, and is also a short story writer.



Delinking degrees from jobs: Education Minister K.C. Pant, in the first meeting with officers of his ministry on Jan 8, called for immediate attention to the question of delinking degrees from jobs. Pant stressed the importance of boosting vocationalisation of education and bringing about educational reforms. He has asked for the preparation of a blueprint setting out the feasibility and methodology of holding a national exam. Also dealt with was the role of the mass media, especially the radio and the TV, in spreading education. On Jan 10, Pant told reporters that G. Parthasarthy, Chairman of the Policy Planning Committee in the External Affairs Ministry, had prepared a report on the proposed delinking of jobs from degrees. The report was expected to be submitted soon.

HEALTH

Tuberculosis (TB) is still the major killer disease in India, according to a report presented to the 39th National Conference on Tuberculosis and Chest Diseases held in Cuttack recently. The report estimates that there are about 10m TB cases in the country of which 2.5m are infectious. About 2.5m new cases are reported every year but only a third of them are detected and treated. According to WHO, there are 20m TB cases in the world today which infect 50-100m people, of whom, 3m die annually.

States' slipshod ways obstruct Centre's programme for malarial eradication: There has been a 12% rise in malaria incidence in 1984, mainly due to the state governments not helping in the implementation of the Centre's programme for malarial eradication. The states were expected to provide matching grants for the programme, to buy insecticides and meet the cost of spraying operations but failed to do so. Union Health Minister Mohsina Kidwai told a conference of malaria and filaria workers in New Delhi on Jan 29. In Bihar, Haryana, Delhi, Rajasthan, Punjab and UP, there was a rise in the number of malaria cases, mainly due to lack of interest by local bodies in carrying out anti-larval operations, she said.

SCIENCE

Drugs from the sea: The Department of Ocean Development (DOD) has drawn up plans to extract drugs from the sea. Some toxins from marine organisms, the DOD says, will yield compounds with pharmacological properties, while several other compounds have inhibitory effects on a variety of disease-producing micro-organisms. Seaweeds can be used to treat maladies such as dropsy, menstrual irregularities, abscesses and even cancer. Hormones derived from corals and jellyfish stimulate muscles, depress blood pressure and act as tranquilisers. Seven national laboratories, including the National Institute of Oceanography in Goa, are engaged in research in the field.

The elusive magnetic North Pole rediscovered: Canadian scientists recently located the magnetic North Pole, which had been pinpointed since 1973, and whose rediscovery will be a boon to flight navigation. The compasses in planes travelling over the North Pole go wild. As a result, the angle between the

geographical and navigational calculations. A team from the Canadian Ministry of Energy, Mines and Resources had found that the magnetic pole is now some 1,500 km south of the geographic North Pole, meaning it has moved 100 km north between 1973 and 1984.

Sky satellites and Star Wars: Astronauts of the US space shuttle Discovery on Jan 25 launched a \$300m spy satellite designed to eavesdrop on Soviet military and diplomatic communications. Discovery had blasted off on Jan 24 on the first US fully classified manned space flight. The Soviet Union called it the first step in President Ronald Reagan's Star Wars plan.

DEFENCE

US-Iraq defence deal: The US will supply 45 jet fighters, radar and anti-aircraft missile networks to Iraq under a deal signed in November, when Iraqi Foreign Minister Tariq Aziz visited Washington. Thirty of the planes will be of the F-15 type and the rest F-16 type. The US will also sell thousands of bullet-proof tents to Iraq. The deal also symbolises Baghdad's displeasure with the Soviet Union for continued supply of weapons to Syria, which reportedly find their way to Iran under an oil-for-weapons agreement between Damascus and Teheran.

China buys defence equipment worth \$56.3m from a British company. The purchase involves a message-processing system with sophisticated radio communications. The deal was struck during an exhibition, Electronics for National Security Asia '85, held in Singapore from Jan 17-19.

The parliamentary committee on the welfare of SC and ST, which submitted its 59th report to the Lok Sabha on Jan 22, has recommended the government to open more recruitment centres for the defence services in areas dominated by scheduled castes and tribes.

Report recommends military role for Commonwealth: A study group of the Commonwealth Parliamentary Association has issued a report calling for the creation of a Commonwealth Defence Force composed of regional rapid deployment units. Commonwealth countries in each region should contribute troops to a small, well-armed ready reaction unit which could be deployed at short notice to meet an external threat, the report recommends. The proposal is likely to be controversial because the Commonwealth mainly serves as a forum for political and economic talks but has no military role. The report will be discussed at the next Commonwealth summit, to be held in the Bahamas in October.

NEIGHBOURS

Gen Ershad's plans for a democratic Bangladesh: Bangladesh President H.M. Ershad on Dec 31 abolished the posts and offices of district martial law administrators and sub-zonal martial law administrators, and two special martial law tribunals, two weeks after promising a gradual transition to democracy. On Jan 15, General Ershad dissolved his Cabinet as the first step in his plan to restore democracy in Bangladesh. He also ordered the restoration of fundamental rights and the juris-

prudence of the Bangladesh Constitution. The Election Commissioner A.K.M. Nurul Islam that elections to the 300 Parliament seats will be held on Apr 6. However, on Jan 16, Ershad appointed a 7-member Cabinet comprising entirely of military officers. Those sworn in included air force and navy chiefs Sultan Mahmud and Sultan Ahmed.

Satisfactory progress in Indo-Nepalese relations: A Nepalese Government report says that Kathmandu's relations with New Delhi during 1973-83 grew satisfactorily despite occasional setbacks. There had been some "positive developments" in the Indo-Nepalese water resources development talks and India had committed itself to long-term purchase of the whole or a major portion of power generated from the Kamali hydro-electric project. The 3,600-Mw project is to be built on river Kamali to supply energy to Uttar Pradesh, besides controlling floods in India and Nepal. Nepal, however, expressed its displeasure over the "unilateral" construction of embankments by India in areas close to the border on rivers which submerge large areas of agricultural land in Nepal. Susta in Nal Parasi district in Nepal Terai and Kalapani in Darchula in west Nepal are disputed territories, the report said. At the same time, the report lauded India's contribution to Nepal's economic development and expressed satisfaction over the progress made in commercial and industrial relations.

Pakistan to go to polls on a non-party basis: Pakistan President Zia-ul-Haq on Jan 16 opened the arena for almost all politicians to contest the national polls on a non-party basis. The move came two days before the 11-party Movement for Restoration of Democracy (MRD) was to meet. The MRD has announced it will boycott the party-less elections. Though the disqualification clause has been dropped, it'll continue to apply in the case of those charged with rigging in the 1977 polls. The disqualification clause had been announced by Zia in a speech on Jan 12. The MRD, however, stuck to its decision to boycott the poll, describing Zia's waiving of the disqualification clause as a farce aimed at creating dissension within its ranks.

Islamisation of Pakistan's economy: President Zia-ul-Haq on Dec 31 promulgated two Ordinances for the switch-over of the national economy to an "interest-free system". The new system is described as "a synthesis in the process of Islamisation and stability". The mechanism for the switch-over is expected to bring about change without disturbing economic stability. Islam prohibits the charging or paying of interest. Under the new plan, all financing to private firms and individuals by Apr 1 will switch to the Islamic system. By July, banks would not accept any interest-bearing deposits, and all savings and term deposits would be made on a profit-and-loss sharing basis.

ECONOMY—National

Technology parks that will take India into the high-tech era will be set up soon by the Indo-American Capital and Technology Corporation. The parks, resembling an IIT campus and linked to industrial corporations in the US via satellite, will receive high technology

higher prices, the ports will deal with computer software and provide fresh ideas and marketing sources to Indian companies located in them. An export revenue potential of \$1b has been predicted by 1990 if all goes well. Right now, India exports software worth \$30m—50% of the total potential.

Food aid likely to benefit 11.6m Indians will be supplied by the United States Agency for International Development (USAID) between October 1984 and September 1985. The aid package includes 3.14 lakh tonnes of oil seeds and vegetable oils, worth \$105m. The USAID also proposes to institute a maternal and child health education programme aimed at benefiting 5.1m Indians. This programme will receive 1.46 lakh tonnes of food, worth \$56.8m.

India's trade deficit during the first seven months of the current financial year has narrowed by Rs 135.9 crores over that during the corresponding period last year. The deficit now is Rs 2,607.8 crores. The decrease is attributed to a 20.9% increase in exports, from Rs 5,023.6 crores in the first seven months of 1984-85 to Rs 6,071.7 crores in the same period of the previous year. Imports grew by 11.7% to Rs 8,679.5 crores from Rs 7,767.3 crores in the first seven months of 1983-84.

Wide policy changes to improve the performance of the farm sector have been suggested by a 33-member working group appointed by the Union Agriculture Ministry. The suggestions include a switch-over from the present subsidy-oriented approach to a service-oriented one; strengthening of key services like power, irrigation, research and extension; discontinuance of the present practice of preparing uniform schemes for the entire country with the Centre announcing only broad programmes and the states having the freedom to prepare their own projects.

Recommending a foodgrain production target of 185m tonnes for the last year of the Seventh Plan, the group identified the following key issues for the Seventh Plan: rain-fed farming, agriculture in the eastern region, increasing productivity of wheat, increasing cropping intensity and irrigation efficiency, toning up of agricultural administration, and agricultural development of tribal areas.

SHEL ranks first among the 100 top engineering companies in the country, according to a survey by the Association of Indian Engineering Industries (AIEE). The company had a sales turnover of Rs 1,193.53 crores in 1982-83 which accounted for nearly 9.2% of the total aggregate sales of the top 100 companies in the same year.

The states' annual total deficit is estimated at Rs 2,000 crores and the revenue shortfall by the end of 1984-85 at about Rs 3,000 crores. Among the states which have overspent are UP, at Rs 300 crores, followed by Punjab, Kerala, West Bengal, Karnataka and Andhra Pradesh. These figures were reached at annual plan discussions between the Centre and the states. Not more than Rs 11,000 crores is expected to be mobilised by the states during 1985-86 and taking the deficit into account, the net additional resources are not expected to exceed Rs 8,000 crores for plan expenditure. Plan expenditure of the states in 1984-85 was projected at Rs 13,000 crores. The Centre's situation is no better: The

3,748 crores against the projected Rs 1,702 crores. The reason for the deficit's lack of impact on prices is said to be the bumper harvest and the 7.2% industrial growth rate recorded during the current year.

The purchasing power of the rupee in November 1984 stood at 16.81 paise with 1960 as the base year, and 12.11 paise with 1947 as the base, Finance Minister V.P. Singh told the Rajya Sabha on Jan 22.

ECONOMY—International

The World Bank will undertake a study of the energy resources and demands of 70 countries. This follows a request by the committee on energy problems of developing countries of the World Energy Conference (WEC) which opened in Bangalore on Jan 21. The World Bank study will examine the growth rates of developing countries, the future demands of energy and the resources needed

REVALUATING BRETTON WOODS

The Bretton Woods system was evolved at a time when the World War II had ravaged the economies of Europe and the US was the only country that could still boast an active, highly productive industry. The nations of Europe, Africa and Asia desperately needed the capital that America could supply. But capital transactions had to be made secure, and in order to do this, the leading nations of the world met at Bretton Woods in 1944 to form the International Bank for Reconstruction and Development (World Bank) and the International Monetary Fund (IMF). The World Bank was to provide long-term loans to countries who could not get private loans at sufficiently low rates of interest. The loans were tied up with developmental projects. The bank floated bonds and used the proceeds to make loans. These bonds are backed by the credit of the member nations.

The IMF, on the other hand, was concerned with short-term credit and cooperative management of foreign exchange rates. It hoped to make the gold standard work, by maintaining stable exchange rates. It would, thus, involve itself with balance of payments (BOP), financing and the necessary adjustments required by a country to solve its BOP problem. The earlier distinction between the World Bank and IMF, has, to a large extent, become blurred. The IMF deals with developing countries as much as the bank does, while the Bank now gives loans, which come with policy conditions as stringent as those of the IMF.

This is due to the changing economic environment. The Bretton Woods system is no longer totally valid today. The system of pegged exchange rates has broken down, giving way to a system of floating exchange rates and the dollar is being increasingly overvalued, as it was in the late sixties. The US is running chronic and rising BOP deficits, while countries like Japan are running surpluses. And the BOP problem is being faced by every developing country. Thus, a revaluation of the Bretton Woods system, would be warranted.

available by 1988 when the WEC meets in France.

ILO report on occupational deaths: Every three minutes, a worker somewhere in the world dies of occupational injury or illness, says an ILO report. Fatal accidents at work have fallen by as much as 30% to 50%, but fatality rates are rising steadily in the Third World, the report says. Reasons: import of new equipment and technology without adequate safety standards, poor maintenance and ignorance of hazards involved. Some 33,000 deaths and 8m injuries, the report estimates, occur in agriculture alone every year, the source of the trouble very often being the tractor. Also, greater use of chemicals as pesticides, herbicides and insecticides has brought additional danger to the Third World.

A majority of OPEC ministers on Jan 30 agreed to cut their oil prices after three days of emergency talks in Geneva. Libya, Algeria, Iran and Gabon were not part of the agreement which levels the price of OPEC's cheapest crudes at \$26.50 a barrel. The highest priced crude will be \$28.90 a barrel from the current \$30.50.

A fall in World Bank's lending activity: World Bank President A.W. Clausen, on Jan 16 told bank directors that he is postponing his earlier plan to expand the bank's lending potential. Reason: a sharp and unexpected drop in Third World loan demands. Clausen expects the bank's loan commitments to fall by at least \$2b in 1985. This is the first time that there has been a reversal in the bank's year-to-year growth in lending activity. Clausen's plans to increase the bank's lending capability had been opposed by the Reagan Administration which feels the current levels, reinforced by free enterprise, will be adequate.

Poland's debts rescheduled: Poland has reached an agreement with 17 Western creditor nations on the rescheduling of about \$15b in public debts. Poland, which is Eastern Europe's most indebted nation, owes about \$28b to the West.

Paper pounds to be replaced by coins: The Bank of England, on Dec 31, stopped distribution of one-pound notes to the clearing banks and, by next Christmas, most of the 560m paper pounds in circulation, will have been replaced by coins. The first pound note was introduced in 1879 during the Napoleonic wars. The British treasury argues the nation can no longer afford the luxury of the pound note which has an average street life of nine months against the 40-year life span of the coin. The coins cost 2½ pence to make compared to 1½ pence for a bank note.

The African food emergency will continue in 1985 with a number of countries picking up poor 1984 harvests, says a special FAO report. The report has identified 21 countries which will face exceptional food supply problems during 1984-85. They are: Angola, Botswana, Burkina Faso, Cape Verde, Chad, Ethiopia, Lesotho, Mali, Mauritania, Mozambique, Senegal, Somalia, Tanzania, Zambia and Zimbabwe, Burundi, Kenya, Morocco, Niger, Rwanda and Sudan. Their aggregate 1984 production of cereals is estimated at 22.9m tonnes, 3.2m tonnes below their drought-reduced output the previous year. Their import requirements are estimated at 10.2m tonnes and food aid requirements at 5.2m tonnes.

would on consumption will fall from 2.1% in 1984 to about 1% in 1985, and OPEC's market share will fall slightly, according to a forecast by the Paris-based International Energy Agency (IEA). Demand for oil in 1985 will reach 46.7m barrels a day, an increase of 400,000 over 1984. Production in non-OPEC countries, which rose by 1.3m barrels a day in 1984, will rise by 500,000 barrels to 28m in 1985. Developing countries outside OPEC, like Mexico, Egypt, India, Brazil, Argentina and Oman, will continue to increase by a small amount their share of the world oil market with a production of 83m barrels a day, 200,000 more than last year. OPEC's share is expected to fall to 39.9% compared with 40.6% in 1984, from 18.8 barrels a day to 18.6m barrels.

The world's population is 4.8b now and will reach 6.1b by 2000 A.D., according to the UN's biennial report. Eighty per cent of the population will be living in developing countries "but the gradual slowdown of the global population growth is still continuing", the report says. The rate of growth decreased from 2% in 1960s to 1.65%. China has experienced the most dramatic decrease, from 2.4% to 1.2%. Africa's growth rate is 3% and rising while that of West Asia is 2.9% and showing no change.

STATES

Decentralised district plan in Gujarat: The Gujarat Government plans to spend Rs 520 crores during 1985-90 for decentralisation of planning to the district level. In 1980, the state drew up and launched a decentralised district plan, to facilitate the autonomous functioning of the specially constituted district planning boards. This is with the objective of making the boards efficient and active instruments of micro-level planning in the state.

Bihar's controversial tax-free budget for 1985-86: Bihar CM Chandrashekhar Singh on Jan 23 presented a tax-free budget for 1985-86 to the state Assembly, despite a Rs 30.25 crore deficit in the estimates. The deficit actually works out to Rs 133.72 crores but has been reduced by clubbing the consolidated fund and public account together. The entire Opposition boycotted the budget presentation in protest against this "financial jugglery".

Manipur Cabinet expanded: Manipur CM Rishang Keishing on Jan 14 expanded his 11-day old ministry by taking in eight Cabinet ministers and three ministers of state; the strength of the ministry is now 13.

West Bengal's development and employment problems: West Bengal CM Jyoti Basu on Jan 15 presented a note to Union Law Minister Ashoke Sen, outlining problems of development and employment facing the state. Sen himself felt that unemployment was the state's biggest problem. To tackle the problem, sick industrial units had to be reopened and several industrial projects had to be set up. Said Sen rhetorically, "We will see how best we can plead for the legitimate claims of West Bengal and safeguard its interests."

Haryana's Seventh Plan outlay: The Haryana Cabinet on Jan 9 approved a demand for a Rs 3,200 crore Seventh Plan outlay, against the previous five-year plan outlay of Rs 1,800 crores. The proposed new outlay envisages Rs 1,633 crores for irrigation, and power, including Rs 100 crores for flood con-

trol and drainage. The plan also includes cooperatives Rs 41 crore, industry Rs 68 crores and education Rs 135 crores. The demand, said CM Bhajan Lal, will be placed before the Centre shortly.

President's rule in Pondicherry has been extended by another six months from Dec 24, 1984. The Union territory's Assembly was dissolved in June 1983 and President's rule imposed after the ruling DMK-Congress(I) alliance broke up.

Indictment of Farooq Abdullah: A Cabinet committee constituted by the G.M. Shah Government in J & K has held that former CM Farooq Abdullah had ignored warnings by the intelligence agencies about activities of anti-national forces and connived with them. Communications received from the Union Home Ministry were ignored by the Abdullah Government which did not act even against the banned AISSF which held several camps in the state, the report says. The 113-page report, which was made public on Jan 10, documents several instances to prove its charges. According to deputy CM D.D. Thakur, the report, "not a white paper", was being released to enable the public make up its mind on how Abdullah tackled various issues concerning the state and the country. Abdullah, a day later, described the charges as "totally false and absurd".

EVENTS—National

Regulations for recruitment of Indian workers abroad: The government on Jan 27 issued guidelines on publication of advertisements for employment of Indian workers in foreign countries. Only registered recruiting agencies and employers granted permits for recruitment of Indian workers can advertise such vacancies. Newspapers and advertising agencies have to secure a certificate from the Labour Ministry or the Indian embassies before accepting advertisements.

Law Commission recommended division of Supreme Court: The Law Commission, in its 95th report to the Lok Sabha, has recommended that the Supreme Court be divided into a constitutional division and a legal division. Such a division would help maintain a certain level of equality, coherence and consistency in constitutional adjudication, it said. The creation of a new institution was not necessary as the existing institution could be utilised with modifications, it felt. The jurisdiction of the constitutional division should cover: 1. every case involving a substantial question of law as to the interpretation of the Constitution; 2. every case involving a question of constitutional law not falling within 1. Other matters would be assigned to the legal division. A case should be regarded as involving a constitutional issue "only when the decision of that issue is absolutely necessary for the disposal of that particular case."

Indo-Mexican accord: India and Mexico on Jan 30 signed agreements for cooperation in heavy industry, biotechnology and cultural activities. The agreements were signed during talks between visiting Mexican President Miguel De La Madrid and PM Rajiv Gandhi.

The national capital region planning board Bill, 1985: The Rajya Sabha on Jan 23 passed the national capital region (NCR) planning board Bill, 1985, which seeks to set up a

body. The proposed authority will look after the development of about 30,000 sq km area around Delhi, covering certain areas of Haryana, Rajasthan, UP and the entire Delhi. The Lok Sabha passed the Bill on Jan 25.

Convening of Indo-Argentinian ties: India and Argentina on Jan 24 decided to set up a joint commission on economic cooperation, and committees on science and technology. The joint commission is expected to meet at least once a year while the committees will meet every two years. The decision to set up the bodies came after talks between the two sides in New Delhi on Jan 24, covering a wide range of subjects. The talks took place during a six-day visit to India by the Argentine President Raul Alfonsín.

A two-day national forum on youth for unity and integration, consisting of Nehru Yuvek Kendra, NCC and NSS, concluded in New Delhi on Jan 14 with a call for abolishing reservation in education and services; such reservation should be on a strictly economic basis. The forum deliberated on cultural, social, economic and developmental aspects of youth in general. The forum also called for abolition of dowry, the purdah system, and sought a common civil code for all religions and sects. Other demands included delinking of jobs from degrees, co-education, inter-caste and inter-religion marriages, elimination of sex and violence from the cinema, and larger youth representation in Parliament.

CMs to take steps to avoid strikes and lockouts: Union Labour Minister T. Anjiah has written to CMs to try and effect a voluntary moratorium on strikes and lockouts in industries for the next four or five years. Preventive conciliation and voluntary arbitration should be considered to avoid strikes and lockouts, and workers persuaded not to go on strike while grievances were being sorted out, the letter said. Employers should be asked not to declare a lockout but approach the government for intervention. To achieve these objectives, Anjiah said the amended provisions of the Industrial Disputes Act should be freely used.

Report suggests ways and means of achieving peace in Punjab: The institute of socio-economic studies, in a report submitted to PM Rajiv Gandhi, and the 3-member ministerial committee on Punjab, has called for demolition of the base of all "sedition and anti-national activities" to achieve peace in Punjab. The massive mandate given to the Congress(I) means that Pakistan cannot dare to interfere in India's internal affairs, the report says, adding that secessionist Sikhs based abroad were also not receiving the same "indulgence, encouragement and facilities" from foreign sources. Some of the steps it suggested were to provide employment to the 2,00,000 educated unemployed rural youth in Punjab, implement land reforms to still the landed aristocracy which backed separatist forces, and devise means to plug the inflow of unaccounted foreign money from Sikhs abroad.

Determination of retirement age through legislation constitutionally valid: The Supreme Court on Jan 18 upheld the government's right to determine the age of retirement through legislation. In the process, the court dismissed writ petitions of Andhra Pradesh Government employees challenging a govern-

transfer of legislative powers by the government. The Telugu Desam Government issued two notifications amending the relevant fundamental rules, and the corresponding rules of the Hyderabad Civil Services in exercise of powers conferred by the Constitution.

Upper age limit for Civil Services Examination raised: The Centre has decided to raise the upper age limit for admission to the Civil Services Examination from 26 to 28 years in 1985. The limit will stand reduced to 26 years from the examination to be held in 1986.

Kudal Commission submits interim report: Justice P.O. Kudal on Jan 4 submitted an interim report to Union Home Minister S.B. Chavan on the Gandhi Peace Foundation (GPF) and allied organisations. The Kudal Commission, constituted on Feb 17, 1982, was initially asked to submit its report in six months. But since then the commission has been given six-monthly extensions to enable it to complete its work. The main charge against the GPF is misuse of funds.

A new ministry created: PM Rajiv Gandhi has carved out a separate Ministry of Personnel and Administrative Reforms and Culture under his direct charge with K.P. Singh Deo as the Minister of State. The ministry will deal with various aspects of Central services, like promotions, transfers, career management, training, discipline and service conditions.

The Planning Commission has been reconstituted: with RBI Governor Man Mohan Singh as its Deputy Chairman. Union Finance Minister V.P. Singh and Defence Minister P.V. Narasimha Rao are among new members of the commission. Dropped are Prof A.M. Khusro and Mohammed Fazal. Retained are M.G.K. Menon and C.H. Hanumantha Rao. The reconstituted commission comprises technocrats, economists and management experts. Among them are Raja Chelliah, public finance expert, Hiten Barja, a technocrat, and Abid Hussain, Commerce Secretary.

The decision-making process in the Union ministries was decentralised on Jan 8 following a directive from PM Rajiv Gandhi. The step is expected to quicken the pace of work in ministries. The reorganisation of the working of the ministries will mean that the secretary of each of them will be able to devote himself to more important policy matters and initiate steps for new projects which could yield fast results.

Reorganisation of ministries and departments: The President on Jan 4 issued an omnibus notification amending the Government of India (allocation of business) Rules, 1961, to reorganise several ministries and departments. Accordingly, the Ministry of Agriculture has been renamed Ministry of Agriculture and Rural Development; the Ministry of Commerce as the Ministry of Commerce and Supply, the Ministry of Education and Culture as the Ministry of Education, the Ministry of Irrigation as the Ministry of Irrigation and Power. The Ministry of Energy has lost its identity, yielding room to the newly created Ministry of Environment and Forests; the Ministry of Labour and Rehabilitation has been divested of the latter department while the Ministry of Steel and Mines enlarged to include coal. The department of sports will be known as the department of youth affairs and sports. Several

National youth day and youth week every year: PM Rajiv Gandhi on Jan 12 opened the National Youth Forum on youth for unity and national integration to launch the year of the youth. Jan 12, the birthday of Swami Vivekananda, will be observed as the National Youth Day and the following week as the National Youth Week every year. The PM called on the youth to rise above narrow considerations and help build a strong and united India.

EVENTS—International

Civilian President for Brazil: The Brazilian Parliament on Jan 15 chose Tancredo Neves as the country's first civilian President in 20 years. Neves, who gained an absolute majority in the electoral college, replaces Gen Joao Figueiredo.

Universe is only 12b years old: Two American astronomers say the universe is not 20b years old, as many scientists believe, but a relatively youthful 12b years. Marc Aaronson of the University of Arizona and Jeremy Mould of the California Institute of Technology made the discovery by detecting and taking into account movements of the cluster of galaxies to which our solar system belongs. The discovery also means the universe is also smaller than earlier supposed, with the most distant observable object being 12b light years away rather than 20b. The size and age of the universe is determined by measuring shift in the spectrum of light from stars and galaxies. The shift, called the red shift because light from more distant objects is shifted to the red end of the spectrum, is used to calculate the distance from the earth to the celestial object.

Israeli withdrawal from southern Lebanon runs into rough weather: The Israeli Cabinet on Jan 14 decided to withdraw the nation's army from southern Lebanon in phases over the next nine months; the first phase will be completed in five weeks. The 2½ year occupation of southern Lebanon has cost Tel Aviv the lives of 600 soldiers and over \$100m. Israel has created a Christian militia called the army of southern Lebanon under Antoine Lahad, a renegade Lebanese officer, to guard its northern borders. However, on Jan 24 Lebanon and Israel broke off their talks on coordinating the first stage of Israel's withdrawal from south Lebanon. No new date was set for another meeting. The announcement came in a joint communique after Israel had accused Lebanon of taking a "totally unrealistic" attitude at the 14th round of the talks.

Second oath-taking by Reagan: US President Ronald Reagan on Jan 20 took the presidential oath for a second term, shortly after Vice-President George Bush took his. It was the nation's 50th presidential oath-taking. Administering it was Chief Justice Warren Burger.

Soviet moves in Afghanistan: The Soviets have cut their military force in Afghanistan to 76,000 men from the 100,000 who occupied the land-locked state in 1980, according to *Jane's Defence Weekly*. The reason for the reduction: the Soviets have adapted their forces to fighting the hit-and-run tactics of the rebels and sent back a lot of hardware unsuitable

for many more Afghan winters, confronting an estimated 90,000 guerrillas divided among some 15 groups.

US high technology exports to non-communist countries to be reviewed: US President Ronald Reagan, overruling objections by his state and commerce secretaries, has authorised the defence department to review high technology exports to non-communist countries. The Pentagon already enjoys that privilege with respect to communist countries. Exports that will come under the Pentagon's jurisdiction will include computer parts, scientific instruments and other equipment that the Pentagon believes can have military application. The US fears that such equipment can be diverted to the Soviet Union by its friendly non-communist nations. Included in this category are at least 15 countries.

US-China package deal: China and the US have agreed on a package of US military sales designed to modernise China's navy and on a port call by three US destroyers to Shanghai in April. The agreement came at the end of a six-week visit to the US by Chinese officials. The US will sell to Beijing sonars, torpedoes, gas turbine engines and a sophisticated shipboard gun to shoot down anti-ship missiles. It is believed the package deal is worth several hundred million dollars, representing the most significant US military transaction with China after the communist revolution.

MISCELLANY

Australia has the world's safest airline, says a British weekly *Flight International*, in a study on airlines safety. Second comes Scandinavia, third Japan, fourth the US, and at the bottom of the table are Columbia, Turkey, Egypt, Indonesia and the Soviet Union. The study covered 1973-84 during which the world's major airlines made more than 100m landings with a fatal accident rate of 1.8 per million landings.

Computer culture in France: France has launched a \$200m programme aimed at making it one of the most computer-literate countries in the world. Thousands of micro-computers will be installed in schools and universities, and pupils and teachers will undergo special training. A total of 1,20,000 desk-top computers will be installed for the use of 11m French students, in addition to 35,000 computers already in use.

DIED

Sir Arthur Bryant, 85, a historian who broke new ground with his biography of Samuel Pepys and whose wartime writings bolstered British morale, on Jan 23, of cancer. Credited with taking history to a wider audience than any historian in the century, Bryant's major success was the discovery of two new diaries and other manuscripts of Pepys, a 17th century diarist.

James Cameron, 73, British journalist and friend of the Nehru family, on Jan 26 after a spell of ill-health, Cameron made his name as a foreign correspondent covering major international events, and later became renowned as a broadcaster.

A.P.



Azharuddin: A runaway triple centurion.

ATHLETICS

Mary Decker (USA) established a new indoor world best in the 2,000 m, by running the distance in 5:34.52, at the Los Angeles sports arena on Jan 18.

★ ★ ★

Asha Agarwal strode into international limelight when she won the 8th International Marathon in Hong Kong on Jan 27. She ran in a personal best time of 2:44:34.0 to finish less than a minute ahead of Kuko Gordon of Hong Kong and Judith Hine of New Zealand. The men's race was won by Alain Lazare of France in 2:18:34.0.

BASKETBALL

Two new champions emerged at the 35th National Championships which ended at the Barabati Stadium Courts in Cuttack on Jan 6. In the men's section, Punjab won the **Todd Memorial Trophy** defeating Rajasthan 70-59 in the final. The defending champions Services lost to Rajasthan in the semis.

The **Prince Basalath Jha Trophy** for women was annexed by the Kerala girls who beat five-time (consecutive) champs Punjab 64-45.

BADMINTON

The 1985 grand prix tournaments began with the Hong Kong Open Championships, which concluded on Jan 13. Morten Frost Hansen (Denmark), who had emerged as the No. 1 last year by winning six of the 14 tournaments, is under great pressure this year to maintain his position. He was defeated 10-15, 11-15 by Yang Yang of China in the finals.

SPORTS

The \$25,000 Masters Invitational Tournament ended in Taipei (Taiwan) on Jan 21 with luck eluding India's Prakash Padukone in the final. He beat Hastomo Arbi (Indonesia's Thomas Cup hero) 18-13, 19-4 in the quarter-finals and then his old adversary Liem Swie King 15-10, 6-15, 18-14 in the semis. But lost to Lius Pongoh 15-5, 9-15, 2-15. In the women's section, Helen Troke scored over Denmark's Kirsten Larsen 11-5, 1-2 in the finals.

BILLIARDS

At the 51st National Championships, which were held in Hyderabad and concluded on Jan 20, Geet Sethi of Gujarat regained the title by beating reigning champion and world amateur No. 2 Subhash Agarwal of Railways 1996-1549.

CRICKET

One-all and the Third Test began at Calcutta. Who would be the winner? India or England? None, decided Mr Rain as he washed out the game. At the end of the fifth day of January, the score still stood at one-all. The only highlights: 22-year-old Mohammed Azharuddin became the eighth Indian to score a century (110) on his debut and Ravi Shastri his third hundred (111) in four Tests.

The seven others who have scored a ton on debut are: Lala Amarnath 118 v Eng at Bombay in 1933-34; Deepak Shodhan 110 v Pak at Calcutta in 1952-53; A.G. Kripal Singh 100 n.o. v NZL at Hyderabad in 1955-56; Abbas Ali Baig 112 v Eng at Manchester in 1959; Hamunt Singh 105 v Eng at Delhi in 1963-64; G.R. Viswanath 137 v Aus at Kanpur in 1969-70; Surinder Amarnath 124 v NZL at Auckland in 1975-76.

There was no rain to save the day for India in the Fourth Test at Madras (Jan 13-18) when England crushed it by nine wickets. Neil Foster claimed six wickets for 104. Mike Gatting and Graeme Fowler's double centuries left India trailing by 380 runs. The last-wicket stand of 51 between Syed Kirmani and Chetan Sharma in the second innings managed to save India from the ignominy of an innings defeat. The only silver lining was Azharuddin's second successive Test century (105). Kapil celebrated his return to Test cricket with a subdued but responsible 53 and 49.

With the Fifth Test ending in a tame draw in Kanpur on Feb 5, England won the series 2-1. The highlights: Azharuddin set a world record by scoring a hat-trick—his third successive hundred (122) in Tests. The other centurion in this Test was Dilip Vengsarkar (137). India built up a massive total of 553 for 8 decl in the first innings.

★ ★ ★

One-dayers are not our forte any more. England beat us 4-1, winning the matches at Pune, Cuttack, Bangalore and Chandigarh. Though India's lone victory at Nagpur had some tense moments for the home team, there was good hitting from Azharuddin (52), Sunil Gavaskar (52) and Kapil Dev (54).

On Jan 10, at Bombay's Wankhede Stadium, in a Ranji Trophy clash against Baroda, Shastri blasted six sixes in a six-ball over bowled by the left-arm spinner Tilak Raj. This equalled the world record of maximum runs in a six-ball over in first class cricket, achieved only by Sir Garfield Sobers in 1968, while playing for Nottinghamshire in an English county championship match, against the bowling of Glamorgan's Malcolm Nash, at Swansea.

★ ★ ★

The First Test between New Zealand and Pakistan at Basin Reserve in Wellington, New Zealand, ended in a draw on Jan 22 due to rain.

★ ★ ★

The National Zonal Championship for limited-overs cricket, the **Doodhar Trophy**, was won for the third year in a row by West Zone (and on each occasion they beat North Zone), this time by six wickets.

FOOTBALL

For the second successive year, Michel Platini, the 29-year-old captain of France, and mid-field player of the top Italian club Juventus, was overwhelmingly elected 'European Footballer of the Year' by the French weekly magazine *France Football*.

★ ★ ★

At the IX Women's National Football Championship in Trivandrum, West Bengal and Kerala emerged joint winners of **Begum Bazarat Mahal Trophy**. Bengal have won it for the seventh time.

SNOOKER

Unseeded Geet Sethi recorded a unique double when he added the National snooker title to the billiards title, at the 51st Nationals at Hyderabad on Jan 23. In the semi-final league he finished undefeated, beating the World Amateur Champion Om Agarwal on the way. In his last match, he got the better of Sanjay Sawant of Maharashtra.

GYMNASTICS

The 28th National Championships were held in Bangalore (ended Jan 15) and a teenaged school-girl of Haryana emerged as the best in the land. The women's events were totally dominated by two Haryana girls with Maharashtra's Sanjivini Karandikar giving a good performance here and there. In the women's section Haryana easily won the team championship and Nirmala Gulia (Haryana) emerged the All-Round Individual Champion with 63.45 pts, and she won three more golds to take her tally to five by winning the vaulting horse, balance beam and the asymmetrical bars. The only other individual title, floor exercises, was won by her team-mate Sunita Sharma.

In the men's section, Railways (483.5 pts) took the team title, but its gymnasts did not figure in the medals for the All-Round Individual Champion, which was won by D.D. Choudhary of Tripura (100.525 pts). He also won the horizontal bar in the individual apparatus.

HOCKEY

The Railways lifted the K.D. Singh 'Babu' Trophy at Lucknow on Jan 3, when they beat Indian Airlines 2-1. Though the score does not suggest so, it was a great match. The spotlight was on the Railways forwards Mohd. Shahid and Mohd. Naim. They had the defence rattled, and the huge crowd in raptures with the kind of game they dished out. It was vintage hockey.

Defending champions Railways also won the National Women's Championship at Bangalore on Jan 14, for the fifth consecutive time, as they defeated Air India 8-7 on penalties, through a tie-breaker. They were scoreless at full time.

HOCKEY: WHAT'S OUR GOAL?

Our hockey players did the best they could... at the Olympics. But their best was not good enough.

Our readers did the best they could... in penning their impressions on Indian hockey. But their best was not good enough either. Did the match-losing performance of the team rub off on them? However, two entries have been selected for the first and second prizes. Excerpts from the prize-winning entries:

First Prize

The story of Indian hockey reads like a fairy tale in reverse. Once upon a time, we used to revel in the glorious exploits of our hockey players. Then along came the monsters—Pakistan... European hockey... astroturf. All the people who could have rescued Indian hockey—Dhyan Chand, Baldev Singh, Ajit Pal Singh—are in the past. So we follow the famous dictum, "If at first you don't succeed, blame somebody." And the most common scapegoat are the officials.

Quite right too. They are a set of incompetent, corrupt and undedicated people. They are there today in the Indian Hockey Federation (IHF) solely to earn the odd foreign trip, to make the odd buck by dabbling their hands in the money sanctioned for players' equipment, allowances, etc. That is why we hear unsavoury stories of managers and coaches of Indian teams abroad going shopping rather than arranging a workout, stories of players having to sign receipts for double the amount of money paid to them.

But all this does not detract from the fact that we—the fans of the game—are also responsible for this deplorable state of affairs. To begin with, I'd like to point out that it is not fair to expect anyone to work for nothing. We should, therefore, press for paid officials. After all, why should we have honorary posts, especially since we don't, and can't, honour them anymore? Paid officials are likely to be more dedicated...

And it's time we stopped yelling for gold. Why must we think of defeat as a calamity, and blow it out of all proportion? The result of this not-too-constructive attitude is that our officials concentrate on short-term objectives rather than building a team. Their only obsession is to win the Asiad or Olympic gold. As if that could be achieved overnight.

Our players' stamina does not put them at a disadvantage anymore. The astroturf is not all

TENNIS

The National Championships ended in New Delhi on Dec 30, without any fanfare. None of the Davis Cup stars put in an appearance. Just for the record, Nandan Bal defeated Enrico Piperno 6-3, 7-5 to retain his men's title, while a new girl on the horizon, Nandini Rangarajan captured the women's title by ousting Bela Pandit 6-4, 6-3. The match of the championships was undoubtedly the men's doubles, in which the junior's pair of Mark Ferreira and Zeeshan Ali pounded out top-seeded, singles finalists, Nandan Bal and E. Piperno 6-1, 6-4.

SANJEEV K. GUPTA

that bad. And it is not essential to change over to the 4-2-4-1 combination. All that is necessary is to change the attitude of the IHF officials.

Suman Srivastava, Delhi

Second Prize

We always participated in hockey with one and only one goal, i.e., to win a gold medal. We won the 1980 Moscow Olympics gold not because we played well but because many good hockey playing nations boycotted that Olympics. Our players did play well at Los Angeles but not too well to win the gold. Where did we go wrong?...

We should learn from past experience that artistic hockey is out now, rough and tough hockey (the kind Europeans and the Australians play) is in. But can we blame our hockey players for our declining standards? I think it would be unfair if we did so. It is the officials of the game who are responsible for our decline. Some suggestions for improvement:

A man is capable of doing anything if his morale is high. Our team lacks this vital quality which can be boosted by providing good accommodation, food, monetary benefits, etc to the players. It is a well-known fact that our hockey players are very lowly paid and if we compare them with our cricketers they are nowhere. The cricketers, as we know, are paid Rs 10,000-15,000 per Test match, get five-star accommodation.... Zafar Iqbal, after the 1982 Asiad, in an interview, disclosed the shameful fact that before the Asiad, our hockey players were given Rs 2 per day for kit maintenance and when they lost in the finals, even that was denied to them. If hockey stars are given the same treatment as our cricketers, they would be able to live up to our expectations.

The training programme is always poorly planned and shabbily executed. The officials address themselves to the business of training only when one or two months are left for the major event. There is barely any time in which to correct our weak points. Various new tournaments can be started to keep the players in touch with their game...

Surinder Pal Singh, New Delhi

ELECTIONS

THE DEBATE THAT NEVER WAS

Jan 20, 1985 was to either sound the death knell for the Congress(I) or perhaps reincarnate the party. The choice was left to the peoples of India. But would Mrs Gandhi give them the opportunity by going to the

polls; may be both happenings?

CCTimes announced a debate on the subject which tickled every enlightened mind in August 1984. But the country's tryst with destiny made for a total transformation in the political arena after Mrs Gandhi's death. Nevertheless, we do not wish to discourage the young enthusiasts who have sent in their opinions on the subject of debate. The winners have been selected from a wide range of interesting entries but we had to restrict ourselves to choosing the best three.

Congratulations from CCTimes.

Now Or Never

The shrewd politician that she is, Mrs Gandhi will hold the elections on time. Nobody will forget for a long time to come, the violence and bloodbath in Punjab and how the army brought the situation under control within hours of take over. Almost everybody agrees that Mrs Gandhi had taken a bold but wise and just decision.

Another point in Mrs Gandhi's favour is her promise of putting 80% of India on the television map. The PM has kept her word and distant dreams have now become distinct realities.

However, Mrs Gandhi is going to have a tough time collecting her votes in south India. The Tamilians are sore with her for not having taken any action regarding the Sri Lanka-Tamils issue. Karnataka and Andhra Pradesh hold better prospects for Mrs Gandhi. The stability of the Karnataka Government is being threatened due to infighting, alleged defections and petty squabbles within the ruling party leaving the CM helpless. NTR's charisma is still too strong in Andhra Pradesh for him to be wiped out, but here again, there are people dissatisfied with him. If Mrs Gandhi capitalises on this situation, as she surely will and holds the elections as scheduled, her party might perhaps come back to power in Karnataka and emerge as a powerful opposition party in Andhra Pradesh.

J & K is another thorn in Mrs Gandhi's side. The people there have not taken the dramatic ouster of Farooq Abdullah's government lightly.

Indira Gandhi has failed to find a solution to the problem of Assam and the Congress(I) will probably suffer a major setback in this state.

Mrs Gandhi is aware that even if she is declared unfit to rule India, there can never be a suitable replacement. The Janata Party came to power in '77 only to lose out to the Congress(I) in '80. The opposition is primarily interested in bringing Mrs Gandhi down, rather than offering a positive viable alternative. So Mrs Gandhi will hold the polls as scheduled and will have the last laugh.

Meera Ramamurthy, Chandrapur (Maharashtra)

First Prize: Rs 150

Preponed Election Alarm

A close look at the general political atmosphere in the country shows that the poll alarm might ring very soon. Operation Bluestar set the election-ball rolling for her. The army action is certainly seen by many people as a reflection of Mrs Gandhi's

(Continued on page 74)

ECONOMY THE OVERDRAFTS OBSESSION

BY BFCO

The failure of most modern governments, as witnessed during the last decade, lies in their inability to live within their financial means. In large countries like India having a federal structure, the states are more prone to financial indiscipline than the Centre. This indiscipline in Indian states is very much reflected in the phenomenon of overdrafts which has been recurring for years now. Until June 1984 the amount of overdrafts in the states was reported to be 'nil', but it has reached about Rs 1,515 crores by January, 1985.

The majority of states are afflicted by this malady. UP tops the list with an overdraft of about Rs 297 crores followed by Karnataka (Rs 223 crores), West Bengal (Rs 220 crores), Andhra Pradesh (Rs 213 crores) and Kerala (Rs 212 crores). In the second category, Punjab carries an overdraft of Rs 92 crores followed by Gujarat (Rs 75 crores), Haryana (Rs 47 crores), Orissa (Rs 45 crores) and Assam (Rs 26 crores). Tamil Nadu, Maharashtra, MP, Rajasthan and Nagaland are lower in the ladder with overdrafts ranging between Rs 9 to Rs 22 crores.

How does overdrafting arise?

It would be interesting to know how these unauthorised overdrafts, as they are called, arise. The financial transactions of the state governments are carried on simultaneously in a large number of disbursing offices, including those of the Reserve Bank, State Bank and other banks, treasuries etc. The government transactions conducted at all such places are allowed to proceed without any reference to the actual position of the cash balance of the state governments, the accounts of which are maintained at the Central Accounts Section of the Reserve Bank in Nagpur. Moreover, state governments do not receive funds from various sources regularly each day, while expenditure has to be incurred almost daily. This naturally causes imbalance between receipts and expenditure and the Centre has to provide temporary facilities.

This is normally done by providing the states with (a) normal ways and means advances and (b) special advances. Under an agreement with the states, the Central government sets up limits for such advances. These limits have been progressively increased. The fundamental principle is that these limits are not to be regarded as a supplementary resource for states to

finance their budgetary deficits, but are intended only to cover day-to-day budget fluctuations and any unanticipated shortfall in receipts for meeting the disbursement of the state governments. When on compilation of accounts it is observed that the state government has drawn beyond the limits permitted, an unauthorised overdraft emerges.

Constraints

State governments contend that they have been forced to take recourse to unauthorised overdrafts because of the difficulties they have to face. They claim that the limits set by the Central government in respect of Ways and Means advances are inadequate to meet the temporary difficulties arising out of uneven flow of receipts and expenditure. States also contended that the Centre was not helping the states adequately with regard to provision of funds in the form of plan and other assistance as well as in meeting unforeseen calamities like drought, floods, etc. Further, such grounds as heavy incidence of payment of loans to the Indian Government, escalation in costs of projects etc, have also been cited by the states in defence of making overdrafts.

The Centre, on the other hand, has pointed its accusing finger at the states by claiming that the latter do not observe the extent of financial discipline expected of them. Over the years it has been observed that the main reasons for overdrafts were the uncovered budgetary deficits of states, expenditure on Plan outlays at levels higher than those approved by the Planning Commission, non-fulfilment of the commitments made by the states regarding additional resource mobilisation, revisions in the salaries and allowances of government employees without making a suitable provision in state budgets.

It is pertinent at this stage to find out whether the states resort to overdrafts solely to cover necessary and unavoidable expenditure. There is little evidence to show that overdrafts emerge after the states have done their best to economise expenditure and maximise resource mobilisation. After 1978-79 all states combined have been incurring deficits, which progressively increased from Rs 222 crores in 1979-80 to Rs 890 crores in 1980-81 and Rs 1,135 crores in 1981-82. In 1982-83, the combined deficit was reduced to Rs 696 crores, but this deficit would have been much higher

to the states

1982. Again, non-development expenditure of states is increasing fast. In proportion to the total aggregate receipts it was 19.5% in 1980-81. According to revised estimates of 1981-82, it rose to 21% and the budgetary estimates for 1982-83 put it at 22.5%. Lastly, the states do not match their effort to cover the deficit. A study of 1984-85 state budgets reveals that many states, including Andhra, Assam, Haryana, MP, Maharashtra, Orissa, Punjab, Rajasthan and UP did not show any additional taxation, despite deficits in their budgets.

This rather uncontrolled spending goes on. Out of about Rs 500b spent annually by the Union and state governments in India, about one-fourth is spent by the latter. Though parliamentary committees such as the Public Accounts Committee (PAC), Estimates Committee and Committee on Public Undertakings exist both at the Centre as well as in the state, it has been found that on the whole the work of these committees at the Centre, is much better than that of the state committees, generally. It has been remarked that "Public Accounts Committees in India have, by and large, failed to control public spending in their states; neither by qualification nor by inclination are most of them suited to do the job." PAC discussions are often superficial and perfunctory on the whole. Recommendations go late and the government takes its own time to act on them. Financial discipline has also received a major set back due to creeping political instability in some of the state governments.

Remedies

The evil of continuing state overdrafts may lead to increasing pressures on general price-levels, besides creating friction in Centre-state relations. Hence the issue should not be left to ad-hoc settlements. Deficit financing as well as overdrafting represent, to a large extent, misallocation of resources which should be avoided. The states, particularly, should formulate balanced budgets in advance. A careful and close watch should be maintained on the flow of receipts and expenditure throughout the year. A system of forecasting the 'ways and means' position must be evolved and it should be ensured that non-development expenditure is effectively controlled. Even development expenditure should be phased out, wherever necessary.

The Central government should, in consultation with the states draw up a national plan for financing relief expenditure on natural calamities in states. An overall policy of curbing financial indiscipline has also to be implemented through mutual action. ■

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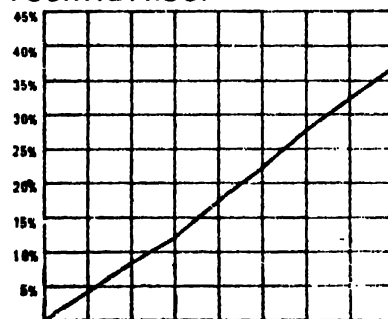


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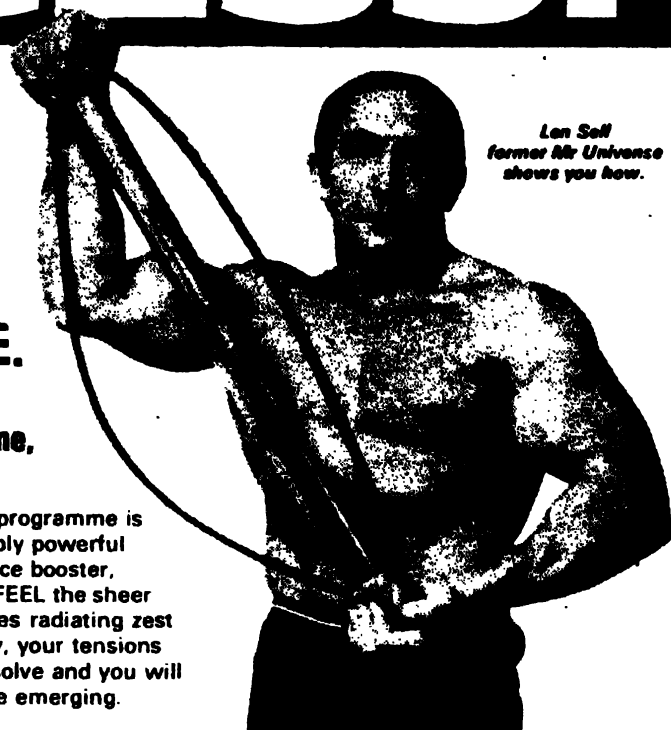
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Indian Forest Service Exam

The Indian Forest Service Exam will be held by the UPSC on 28-7-85. Age limit: A candidate must have been born not earlier than 2-7-59 and not later than 1-7-64. Educational qualifications: Bachelor's degree with at least one of the subjects—Botany, Chemistry, Geology, Maths, Physics or Zoology, or a bachelor's degree in Agriculture, Engg. or equivalent. Application forms and further details can be obtained from the Secretary, UPSC, Dhoolpur House, New Delhi-110 011 by remitting Rs 2 either by M.O. or crossed IPO payable to the Secretary, UPSC, at New Delhi General Post Office. Last date for receipt of applications is 1-4-85.

IIFT, PG Dip. Prog. Course

Indian Institute of Foreign Trade (IIFT) announces Postgraduate Diploma Programme in International Trade. Eligibility: A master's or equivalent in any recognised discipline, or a degree in any branch of Engg. Technology or a degree in Arts, Science, Commerce or Law with 55% marks in aggregate. Age: Not more than 28 years as on 30-6-85. Copies of the prospectus and application forms can be obtained by sending a crossed IPO of Rs 10 drawn in favour of the institute to The Programme Officer, Indian Institute of Foreign Trade, Ashok Bhawan, 93, Nehru Place, New Delhi-110 019. Last date for receiving applications is 31-3-85.

Opportunities Abroad

If Middle East is where your heart lies, then the King Saud University (formerly University of Riyadh) in Riyadh, Saudi Arabia has just the right openings for you, **provided:** you hold a Ph.D. and/or academic titles from accredited universities (for posts of Professors, Associate Professors, Assistant Professors), and a bachelor's degree in English (for posts of English language instructors).

The colleges and departments: **Science College** P.O. Box 2455, Riyadh.

Departments: Chemistry, Biochemistry, Physics, Astronomy, Botany, Zoology, Geology, Maths, Statistics, Computer Science.

Administrative Sciences College, P.O. Box 2459, Riyadh.

Department: Hospital Administration.

Pharmacy College, P.O. Box 2457 Riyadh.

Departments: Pharmaceutical Chemistry, Pharmacology, Pharmaceutics, Pharmacognosy, Clinical Pharmacy.

Engineering College, P.O. Box 800, Riyadh.

Departments: Architecture, Civil Engg. Mechanical Engg., Electrical Engg. Chemical Engg., Petroleum Engg., Computer Engg., Nuclear Engg., Industrial Engg.

Medicine, P.O. Box 2925, Riyadh.

Departments: Anatomy, Physiology, Pharmacology, Pathology, Parasitology, Gynaecology and Obstetrics, E.N.T., Forensic Medicine, Community Medicine, Ophthalmology and Eye Surgery, Surgery, Medicine, Paediatrics.

Dentistry College, P.O. Box 5967, Riyadh.

Departments: Operative Dentistry, Oral Diagnosis/Medicine, Oral Surgery, Oral Pathology, Oral Radiology, Oral Biology, Removable Prosthodontics, Fixed Prosthodontics, Endodontics, Periodontics, Pedodontics, Orthodontics, Community Dentistry, Dental Public Health.

Allied Medical Sciences College, P.O. Box 10219, Riyadh.

Departments: Clinical Laboratory Sciences, Radiological Sciences, Rehabilitation Sciences, Community Health Sciences, Biomedical Technology, Dental Health, Nursing, Surgical Technology, Medical Assisting, Anaesthesiology, Emergency Medical Technology.

Computer & Information Sciences College, P.O. Box 2454, Riyadh.

Departments: Computer Engg., Computer Science, Computer Technology, Information Science.

Planning & Urban Designs College, P.O. Box 800, Riyadh.

Departments: Architecture and Building Sciences, Planning, Regional Design, Interior Design.

Medicine & Medical Sciences at Abha College, P.O. Box 641, Abha.

Departments: Anatomy, Physiology, Family and Community Medicine, Biochemistry, Pathology, Microbiology and Parasitology, Pharmacy, Medicine, Paediatrics, Surgery, Medical Education.

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gratuity, free medical and dental care covering family and contribution by university to tuition fees of non-Arabic speaking children.

Interested? Then mail written applications with non-returnable copies of your academic diplomas and specialised experience certificates together with your resume (including a list of your published articles and references) to the Dean of the college concerned. Do not forget to indicate the position applied for and the subjects you are qualified to teach.

Oil & Natural Gas Commission

Oil and Natural Gas Commission (ONGC) is on the look out for bright, young, talented Indians for appointment as executives in various technical and supporting disciplines. Applicants who have secured 60% marks or equivalent grade in the qualifying exam are eligible to apply. Candidates will have to appear for a written objective-type test on 2-6-85. The test will consist of two parts—one relating to discipline/specialisation and the other to aptitude. For further details see the *Employment News* of 2-2-85. Last date for receipt of applications is 1-3-85.

Staff Selection Commission

Staff Selection Commission will hold a competitive exam on 7-7-85 for recruitment to the post of clerks. Age limit: 18 to 25 years as on 1-8-85. Educational qualification: Matriculation or equivalent. Knowledge of typing either in English or Hindi is essential. The exam consists of two parts: Part I will be a written exam of objective multiple-choice type and Part II will be a typing test.

For the format of application form and other details see *Employment News* of 26-1-85. Last date for receipt of applications is 25-3-85.

BIT Entrance Exam

Birla Institute of Technology (BIT) Mesra, Ranchi, will hold an entrance exam on May 25 and 26, for admission to (1) B.Sc. Engg. four-year degree course in Civil, Electrical, Mechanical, Electronics & Communication, Computer & Production Engineering and (2) B.Pharm. four-year degree course in Pharmaceutical Sciences. Qualifications: For B.Sc. Engg. 10+2 or equivalent with Physics, Chemistry and Maths and for B.Pharm with Physics, Chemistry and Biology. Application forms can be obtained on payment of Rs 10 by IPO, payable to the Registrar, Birla Institute of Technology, Mesra, Ranchi. Last date for receipt of completed application forms is 15-4-85. ■

BETTER ENGLISH

UNDERSTANDING COMPREHENSION-1

BY RAGHU BHATNAGAR & RAJUL BHARGAVA

Comprehension is a multi-dimensional process which involves an analytical understanding of a given subject matter, by grasping the hidden meaning in-between the lines. This article is the first in a series on the subject.

It is perhaps not always realised that being educated in a large measure implies a capacity for acquiring new understanding, through reading and integrating it with the knowledge already acquired. This process is what we broadly call comprehension. On a more technical level, comprehension involves a wide range of skills and interests. As a truly multi-dimensional affair, it encompasses a variety of abilities with respect to vocabulary, grammatical and discursive features, inferential processes and contextual knowledge. According to Carroll some of the factors operating in comprehending a text are: remembering word meanings; following the structure of a passage; finding answers to questions answered explicitly or in paraphrase; recognising a writer's purpose, attitude, tone and mood; and drawing inferences from the context. This last factor needs special notice since even the meaning of a word or a phrase in a stretch of discourse may depend upon what has preceded it (textual or linguistic context), and on the presuppositions as well as personal and cultural considerations relating to the writer (extra-textual or extra-linguistic context).

For proper comprehension it is also necessary to know what Wayne C. Booth has called 'Rhetorical Stance':

The common ingredient that I find in all of the writing I admire... is something that I shall reluctantly call the rhetorical stance, a stance which depends on discovering and maintaining in any writing situation a proper balance among the three elements that are at work in any communicative effort: the available arguments about the subject itself, the interest and peculiarities

of the audience and the voice, the implied character of the speaker.

The Rhetorical Stance College, Composition and Communication

It needs sustained training to be able to understand this 'Rhetorical Stance'. It should, however, not be forgotten that there is a more basic skill in the absence of which the above stance would be incomprehensible. It lies in the ability to know the writer's purpose which may be all kinds of things—to clarify, to criticise, to defend, to promote, or to warn.

A parallel requirement is the clear perception of a writer's style—the distinctively original and personal way in which a writer expresses himself and thus establishes his unique identity. It is not very different from our recognition of a friend's identity by hearing his voice, on the telephone. Yet another requirement calls for a clear awareness of the tone of what one reads. It is the writer's attitude towards his subject, his reader, or both. As in the case of style, tone in writing is also like the tone of voice in speaking and it also performs the same function—expressing anger, indignation, gentle or exalted feeling, respect, defiance, praise or indifference. All this and much more is achieved through the manipulation of language which includes choice of words, peculiarities of usage and structure and the use of images, figures of speech, rhythm and even punctuation.

Reading is important not merely because it gives access to new knowledge. Being an active process requiring effort, concentration and deliberation, it is an aid to thinking. Not only this, anyone seriously interested in improving his writing cannot ignore good and extensive reading. The reason is not far to seek. Both reading and writing, as indeed also thinking, involve similar problems of organisation, development, logic and expression (the last named quality being not involved in thinking).

Prose discourse usually takes on four forms: narration, description, exposition and argumentation. Each form serves a distinct purpose. Narration tells a story by recounting an incident or event. Description 'paints' or pictures in words an object, a person, a place, a state or a process. Exposition seeks to inform, set forth, explain or clarify. Argumentation is con-

cerned with matters involving differences of opinion and it seeks to persuade for or against a certain point of view.

Just as all writing has a discernible purpose behind it, so also it has a well-defined structure. Ordering, arranging, organising, developing the material in hand according to recognised principles result in patterns of structure which lend formal unity, grammatical cohesion and semantic coherence to the composition.

The search for structure can be at the paragraph level or at a higher-than-paragraph unit level (intra vs inter-paragraph structure). Within the paragraph, sentences should flow smoothly, one into the other. One of the common devices for achieving sentence flow is the use of transitional words or phrases such as *next, besides, then, however, thus, consequently, indeed, in addition, therefore, moreover, nonetheless, on the contrary, as a result, on the other hand, furthermore*. Some of these can also be used for connecting paragraphs. Or, such phrases and clauses as *for example, in conclusion, to sum up, we now see that, at last*, can be used as inter-paragraph transitional devices.

Each paragraph is built around a key idea contained in or expressed by what is usually called a topic sentence. All other sentences in the paragraph generally support the topic sentence. Thought development within a paragraph follows certain recognisable patterns. Prominent among these are *example, time arrangement, space arrangement, general and specific, statistics, comparison-contrast, division or classification, cause and effect and analogy*.

Recent thinking about discourse analysis has led to a meaningful distinction between a sentence and an utterance. The former is a grammatical unit, the latter a communicative unit. There is no one-to-one correspondence between the grammatical status of a sentence and its communicative or utterance value. Thus both 'Have a seat and I'll get you a drink' and 'Move an inch and I'll knock your teeth in' are imperatives but the communicative function of the former is giving a suggestion, while that of the latter is holding out a threat. Intelligent reading requires an awareness of the intonation that links a sentence function with its utterance

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(RICHJA JAIN)

Dated: March 1, 1985

Signature of Publisher

Another useful aid to a good reader is to make him aware of two aspects of connected writing. Sentences combine to form texts and the relations between sentences are aspects of grammatical cohesion. On the other hand utterances combine to form discourse and the relations between them are aspects of discursive coherence. Thus both the following examples are coherent as discourse, but only the first one is a cohesive text, with the second sentence linked to the first by ellipsis.

A: Can you go to Bombay tomorrow?
B: Yes, I can.

A: Can you go to Bombay tomorrow?
B: Indian Airlines pilots are on strike.

Another way of looking at the problem of comprehension is to treat it on the basis of the dichotomy between what is called pure or simple comprehension, on the one hand, and inferential and implicational comprehension, on the other. The former requires a mere understanding of the words in their normal syntax, the latter, besides a literal comprehension of the text, "an apprehension of the total situation described" in the text "and a sensitivity to social relationships and expectations"

mentioned at it. Thus a text and the following would require mere simple comprehension:

Today, with the rapid spread of all forms of modern communication, ignorance of the major facts about India cannot be excused.

On the other hand the following example from Davis as quoted by Carroll would make any reader proficient only in simple comprehension feel out of his depth:

The delight Tad had felt during his long hours in the glen faded as he drew near the cabin. The sun was nearly gone and Tad's father was at the wood pile. He was wearing the broadcloth suit that he wore to church and to town sometimes. Tad saw his father's hands close around a bundle of wood. He was doing Tad's work—and in his good clothes Tad ran to him. "I'll git it, Pa."

Exercise:

When Tad saw his father, he felt

A: disappointed

B: impatient

C: angry

D: guilty

It is not easy to say which linguistic skills in what order and combinations would enable the expert reader to infer or deduce D

as the correct answer. However, as pointed out by Carroll, the following two important points seem to be indisputably involved in comprehension:

(1) Language comprehension occurs in situational contexts whose characteristics may influence not only the degree to which comprehension processes operate but also the nature and extent of certain other processes that may accompany comprehension, usually as a consequence of it. The special arrangements that are frequently necessary to test comprehension constitute such situational contexts.

(2) Two processes often co-occurring with comprehension are memory and inference; while they are conceptually distinguishable from comprehension, their occurrence may make it difficult to assess the separate occurrence of the comprehension process itself.

In the next issue we will look into comprehension in practice as part of language in use.

We will take up sample passages and illustrate various kinds of difficulties involved in comprehending them.

(To be continued)

Answers to

TEST YOUR WORD POWER

- adage:** C: old and wise saying that expresses a common observation in a way that gives it the authority and force of a truth. Indian economists confirmed a record 7% growth in the industrial sector for 1984, proving the popular adage that a good agricultural year is good for industry.
- ambidextrous:** D: able to use both hands equally well. Ravi Shastri, the ambidextrous India all-rounder, recently equalled the world record for the maximum number of sixes in one over—six—set by former West Indies captain Sir Garfield Sobers in first class cricket.
- aroma:** A: pleasant or savoury smell; fragrance. Green and plump, packed with enough flavour and aroma to perk up anyone on the gloomiest of mornings, the coffee bean ranks as one of nature's tastiest gifts.
- bulwark:** C: any person or thing giving strong support or encouragement in time of need, danger or doubt; something that defends or protects; rampart. Rajiv Gandhi is expected to maintain India's place as a bulwark of the Non-aligned Movement.
- contentious:** D: quarrelsome. In the complex and contentious world of arms control, the question of the hour, and of some years to come, is about Star Wars.
- gaunt:** A: lean; haggard as from hunger, ill-health or suffering. Gaunt, starving, often dressed in rags, thousands of Ethiopian refugees continue to stagger across the drought-stricken northern wastelands of their country.
- hiatus:** B: gap in a series, making it incomplete; any break or interruption of continuity. The announcement that the US-Soviet arms control talks would resume on Mar 12 ended a 14-month hiatus in the negotiations.
- impunity:** C: freedom, or exemption, from punishment or injurious consequences. Hundreds of Bangladesh nationals with fake travel documents or no documents at all are "bribing their way into India" every day with impunity at the Petrapole checkpoint alone.
- infuse:** A: to fill (somebody with); pour in; instill; inspire; imbue. Nineteenth century Oxford was infused with such colossal controversial energy that the texture of England, even today, bears the imprint of the city's Victorian vigour.
- invest:** A: to put or commit (money) in order to earn a financial return. An increasing number of foreign banks are making a beeline

to invest in India, which they realise has a good track record in debt servicing, a relatively stable political system and economy.

- pristine:** D: unspoiled; untouched; original; primitive. To restore the 2,500-km long Ganga to its pristine purity, a four-tier Ganga authority is being set up with an apex body to be chaired by the PM.
- psephologist:** C: one who makes a scientific study of election trends, e.g., by means of opinion polls. While journalists went hopelessly wrong in predicting the results of the general elections in 1984, psephologist Pranjoy Roy's prediction came eerily close to the final tally.
- refrain:** A: to hold oneself back; abstain from; check. Each super-power refrains from attacking for it fears an equally devastating retaliation from the other.
- rendezvous:** A: meeting place. The district of Gudalur, which contains the lower slopes of the Nilgiris, is a rendezvous point for the three southern states of Kerala, Karnataka and Tamil Nadu.
- resilient:** B: able to recover from trouble, sorrow, misfortunes, etc; buoyant. Rajiv has inherited a nation that has proved remarkably resilient in times of stress and made steady progress toward easing its perennial problems of poverty and overpopulation.
- shun:** A: to avoid; abstain from. Last year, the percentage of coffee drinkers in the US who shun caffeine soared to 31%, up from 17% in 1978.
- throng:** A: to crowd. Women in black veils and fierce-looking men with Yemen daggers throng the dirty streets of Sanaa, the capital of North Yemen.
- upheaval:** B: great and sudden change. After more than a year of political and economic upheaval following the assassination of opposition leader Benigno Aquino, the signs of hardship in the Philippines are everywhere.
- vogue:** D: popular favour, use or acceptance; current fashion. For the past few years, Europe's drug firms have been in vogue with American investors.
- weary:** C: tired; exhausted. Weary joggers and walkers can now treat their feet to a massage practically anytime and anywhere with a pocket-size device called the Footdoctor.

Vocabulary Ratings:

- | | | |
|---------------|-------|-------------|
| 20-18 correct | | exceptional |
| 17-15 correct | | excellent |
| 14-12 correct | | good |

CIVIL SERVICES EXAM

(Continued from page 16)

papers are of the Matriculation or equivalent levels and are qualifying papers. However, the marks obtained in these papers are not counted for ranking; the General Studies paper and optional subjects of only such candidates are evaluated who attain the minimum standard fixed by the UPSC in their discretion for the qualifying papers on Indian language and English. Hence it is advisable that these papers should not be totally neglected while preparing, and full attention must be given at least in the exam hall.

The optional subjects include Agriculture, Botany, Zoology, History, Law, Sociology, Psychology, Maths, Physics, etc. Though the question papers are set in Hindi and English the candidates have an option to answer them in any of the languages specified in the Eighth Schedule of the Indian Constitution.

The standard of the exams is of Honours level. Candidates are expected to give clear, analytical, comprehensive and complete answers. Though the papers offer some choice, introduction of compulsory questions over the past few years has made it essential that the whole course be covered thoroughly. Besides, the trend is more towards general and comparative questions where the candidate is required to mention, in brief, the salient features of the topic and finally make generalisation or comparison. In brief the exam tests your analytical ability, depth of knowledge and the ability to extract any essential information.

It is advisable that the candidate must follow clearly what is being asked and answer only to the point. A well illustrated and documented answer will certainly fetch good marks.

The General Studies paper covers a wide course including Indian culture, national movement, Gandhi, Nehru and Tagore, current affairs (national and international), Statistical Interpretation, Indian Constitution, Polity, Economics, Geography and Science and Technology in India, etc. All the above mentioned topics are asked in the exams. The aim of the General Studies paper is to help the candidate develop a balanced personality, where he gathers information of all types and takes interest in all important matters—Science or Humanities. He is supposed to know the socio-economic milieu of the Indian masses, the government Plans and their impact on the masses, besides having knowledge of current affairs, inventions, discoveries, etc. The emphasis is not only on gathering information but on analysing the facts and forming an independent opinion. The candidate is expected to see things from an

impartial and unbiased angle, make generalisations and come to conclusions of his own.

Speed is very important in the General Studies paper. The paper is divided into several parts and most of the questions asked are specific and to the point. The candidate's answers must be specific and supported by evidence, diagrams and data, wherever required. The UPSC also helps the candidate by specifying the word limit for each answer.

Interview

Candidates who obtain the minimum qualifying marks required in the written part of the Mains as fixed by the UPSC, are summoned for an interview for testing personality.

The number of candidates summoned for the interview is nearly twice the number of vacancies to be filled up. The interview carries 250 marks (with no minimum qualifying marks). Final ranking of candidates is done on the basis of marks obtained in the Mains ($300 \times 6 = 1800$ marks) and interview (250 marks) i.e. the combined marks obtained out of a maximum of 2050.

Interviews are held sometime in March-May, in New Delhi at the office of the UPSC, Dholpur House. Each candidate is examined by a board of interviewers and allotted marks. A candidate is judged in totality at the interview—his turn-out (outward as well as inner), his knowledge, his expression, his capabilities, his views, etc. Candidates are advised to behave as follows for the interview:

- Dress as usual.
- Be at the interview venue in time.
- Relax. Don't be nervous. Number of candidates called for the interview is just double the number to be selected. You have already covered 1,800 marks and are to be judged only for 250 marks.
- Behave nicely and courteously. Present yourself with a pleasant smile and a polite greeting when you face the examiners.
- It is better to talk a lot and get some things wrong than to say nothing and sit silently.
- While your accent and pronunciation should be as accurate as you can make them, the examiners will really be far more interested in your fluency and understanding.
- There is nothing like right or wrong in most of the answers. What is important is that one must be able to justify opinions or answers.
- Most of the time the examiners are there to help you, so don't face an interview with apprehensions and inhibitions.

A candidate taking due care as outlined above is most likely to find his name in the list of selected candidates taking the UPSC Civil Services Exam.

ELECTION DEBATE

(Continued from page 67)

determination to deal firmly with disrupting elements of the country. The dismissal of the Abdullah Government has raised some controversies, mostly academic in nature, and has failed to stir the common people unlike the events in Punjab.

In Assam, Saikia is relatively successful in consolidating the position of the Congress(I). In Tamil Nadu, the Congress(I) and the AIADMK have entered into a 'marriage of convenience' with the elections in mind. In Nagaland and Mizoram, the position of the Congress(I) has vastly improved. In the by-elections in a 'red-state' like West Bengal, the people are electing many Congress(I) candidates in the left dominated constituencies. On the other hand, the half-hearted attempts of the opposition leaders to unite themselves are not going to materialise easily.

If Mrs Gandhi wants to postpone the elections now, she would have to make an amendment to extend the life of the Parliament. But an image-conscious Mrs Gandhi knows that this would not be a practical move on her part. She always likes to have legitimate authority as her base to rule the country according to her wishes and she is not going to waste the opportunity to do so now. She needs one and a half month to alert the Election Commission about her decision to hold the poll. So we have no reason to be surprised if the elections are held before the first dawn of 1985.

Dipanker Sinha, Calcutta

Second Prize: Rs 100

Marking Time

Mrs Gandhi makes no secret about wanting to see her son Rajiv follow in her footsteps as Prime Minister. Her political manipulations in pursuit of this dynastic dream are now so blatant that they threaten to tarnish the country's image of a true democracy. The dismissal of governments in Sikkim, Pondicherry, Goa, Tripura and more recently, the toppling of the Farooq Ministry and the overthrow of the NTR Government, in spite of the latter enjoying a majority, shows clearly Mrs Gandhi's desire to remain in power at any cost.

It is a well-known fact that the AIR and Doordarshan are mouthpieces of the Congress(I). The mushrooming of TV transmitters just in time when the elections are due, can serve only one purpose—a wide canvas for Mrs Gandhi and her party.

On all occasions, Mrs Gandhi's success depended on a disunited Opposition. The NTR episode, however, gave the Opposition a wonderful opportunity to unite again on a political issue. Whatever prestige Mrs Gandhi might have mustered by the Punjab action, has been nullified by her blatant act in Andhra which provoked countryside protests.

In the south, the people of Tamil Nadu are unhappy by the manner in which the Sri Lanka issue is being tackled by the Centre.

Against this background it may be concluded that Congress(I)'s insecurity in several states will compel Mrs Gandhi to postpone the Lok Sabha elections.

P. Ravi Kumar, Hyderabad

Third Prize: Rs 75

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A Coffee Break

SAGA OF THE 10 IFFI

The cinematic world was poised for a major "take". Cameras focussed on the enchanting chairperson, Jeanne Moreau to give the jury's verdict on the best feature film of the year. And when she did, it was "lights", "camera", "action" and thundering ovation! The prestigious Golden Peacock had been won, at the 10 International Film Festival of India (IFFI), Delhi.

The award was to be shared by two feature films—the UK entry *The Bostonians* and the Russian film *Ruthless Romance*. *The Bostonians* also walked off with the best actress award which went jointly to Vanessa Redgrave and Madeleine Potter for their memorable portrayals of the characters Olive and Verena Tarrant. The best actor was Carlos Verea who rendered an outstanding performance in Nelson Pereira Dos Santos' Brazilian film *Memoirs Of Prison*, based on a novel by Graciliano Ramos. (For other awards see *News Capsule*.)

The two award-winning feature films were selected from a spectacular fare of 23 titles, in the competitive section, unspooled before the jury at Vigyan Bhawan from Jan 3-17. As per the organisers' word, the 10 IFFI is the biggest in its 'variegation of sections', its 'prolixity of seminars' and generally in all dimensions. Yes, one tends to fully agree with the organisers who had reduced the festival inaugural to the biggest *nautanki* ever witnessed.

Bad Start

Film festivals in India are organised by the Directorate of Film Festivals which is controlled by the National Film Development Corporation (NFDC). This year there was an effort to emphasise the film industry's participation and they were asked to partake the major task of managing the inaugural. The result? Utter disaster. All dignity and decorum was thrown to the winds by the Bombay *filmi duniya* (mind you, the representation from regional films was absent) who conducted the inaugural in their own box-office hit style. Not once did they pause to think that the world's eyes were on them and that it was an international event.

Was it meant to be a national film star festival when the star-spangled pageantry from the world famous Raj Kapoor down to the small fry Artr Gupta, was made to parade on the dais? To make matters worse the stars were lined up in front of the revered nine-member jury seated on the dais. Could there have been a more inept and undecorous way of treating the key personalities of an international film festival?

The situation was muffed up further by Raj Kapoor and Robert Naumov who, in the garb of reporters, embarrassed many leading directors by not pronouncing their names correctly and rounding off the announcements with the names of the winners. Names have not been



A still from the award-winning Russian film *Ruthless Romance* about a girl in search of genuine love.

called may also come up the stage". At this stage the Executive Director of Film Festivals, A. Viren Luther, ought to have shrunk under his chair. Besides, there was little or no stress on the presence of foreign guests. Was it because the star presence of Michael Caine and Christopher Reeve was conspicuous by its absence?

Who's Responsible

There can be no second opinion that Luther has to take the entire blame for the mismanaged start to the festival. "The star pageant was not part of the inaugural," Luther claims. "The rehearsal was only up to the lighting of the lamp. It erupted in a spontaneous manner."

Puttara Kanagal, the renowned Kannada film-maker, whose retrospectives were screened at the festival, felt that the responsibility for all the hallaballoo must be borne by the person who heads the festival. Adoor Gopalakrishnan, the eminent film-maker from Kerala, walked out in protest, not because he was not called over to the stage but because "the lining up of the stars, with their backs to the jury, was most unbecoming". Incidentally, the jury members were no less renowned than the chairperson Jeanne (French actress/director) Safi Foye (Senegalese director), Istvan Gaal (Hungarian film-maker), the US director Conrad Rooks of *Siddharth* fame, Serge Losique (Canadian Film Festival President), Vladimir Naumov (Soviet director), Nicholas Roeg (English cinematographer), Shabana Azmi and Soumitra Chatterji.

Asked about the bad start to the festival, Jeanne exuded a sense of cine-diplomacy. "I

am not shocked by the confusion...some people are not used to organising sophisticated festivals.... I am not here to judge your organisation, I am responsible for my work here," she said.

Could the future organisers please get 'used' to organising good film festivals by doing some home-work? Perhaps they can be groomed by expert management bodies like the Indian Institute of Management, Ahmedabad.

Rich Forum

Having crawled out of a bad start, 10 IFFI provided a rich forum for the cross-exchange of cinematic cultures of Third World countries. The focus was on Latin American cinema: Austere in form and obstructed by lack of funds, Latin American directors (*Up To A Point*, *Memoirs Of Prison*) have ably utilised the powerful medium in portraying the miserable life in these countries.

The festival also displayed a notable array of the directorial ventures of world movie moghuls, presented through different sections: the information section, three Indian retrospectives, three foreign retrospectives, a competition section, a section of films from Latin America, black American cinema, the Documedia for documentary and short films and the Indian Panorama. Films of Shohei Imamura, the director from Japan (*Diary Of Sukeki*), Alexander Korda, the producer-director from UK and Nikita Mikhlov, the director from USSR were screened. The opening film *Jules And Jim* was screened as an apt homage to Francois Truffaut (director, France)

who passed away a few months ago. Unable to get his latest film *The Last Metro* (1981), a

on Truffaut's favourite theme—the inter-relationship between life and art—the organisers opted for *Jules And Jim* because Jeanne who stars in the film was the head of the jury. There was a retrospective of the works of Luchino Visconti (*The Damned*). Three of his classics—*The Leopard*, *Conversation Piece* and *Senso*—are renowned. Bernardo Bertolucci's (*Last Tango In Paris*), *La Luna*, was programmed for the information section. Ironically the film was banned by Indian censors some years back as it dealt with incest. Eric Rohmer's *Full Moon In Paris* was reportedly a let down while Mike Nicholas's *Silkwood* was considered outstanding. The film relates the story of a 28-year-old woman, who is mysteriously killed while on her way to a newspaper office, to deliver an expose to the *New York Times* about the violation of safety rules in a nuclear plant. Franco Zeporelli's *La Traviata*, the screen version of Giuseppe Verdi's opera of the same name, was much appreciated by critics. *Maria's Lovers* by the dissident Soviet film-maker Andrei Mikhailov Konchalovsky was much talked about film because the director, surprisingly, demonstrates a feel for the

American milieu and temperament. The director's 1979 film *Siberiade* brought him world fame.

Selection Not Classy

The information section entries were considered first-rate. *Where The Green Ants Dream*, *Love Is Dead*, *Swan In Love*, *Full Moon In Paris* and *Secret Is The Best Revenge* were handpicked by critics as really worthwhile. *Secret...*, made by the dissident Polish director, is a searing comment on the current Polish political situation.

The mystery of the selection criteria for the films screened in the festival remains to be solved, for most films in the information section had been shown in other festivals, in the sections other than main. One reason attributed was that the Motion Picture Export Association of America was not participating and the package from independent producers was not festival class. Even in the other sections the aim of promoting the newest in world cinema was not achieved.

The competition section had one feather in its cap. It did fare better than the 9 IFFI where the head of the jury, British film-maker Lindsay Andersen, did not consider any film worthy of the Golden Peacock. This year's winner *Ruth-*

less Romance directed by Eldar Ryazanov tells the tale of a pure and exalted girl who strives for a genuine love, but encounters a cold reckoning resulting in her death.

The Bostonians, the co-winner, is the latest Ivory-Merchant-Jhabwala venture. Based on the Henry James novel, the film interweaves the early pangs of the women's movement with a triangular love story of great intensity, in the last two decades of the 19th century.

The Indian entry to the competition section was Govind Nihalani's *Party*. Only one film was entered though each country is entitled to two. Here again the selection group layed the axe on two significant titles. Kumar Shahni's *Tarang* and Ketan Mehta's *Holi*.

The Indian Panorama also came in for much criticism: *Andhi Gali*, a film which was rejected by the regional panel in Bombay was cleared by the Central panel for entry into the panorama. However, there were a substantial number of high calibre films: Kumar Sahni's *Tarang*, Nihalani's *Party*, Girish Karnad's *Utsav*—a loosely assembled fable about a courtesan, which ends up showcasing Rekha—Adoor Gopalakrishnan's *Mukhamukham* and *Adaminte Variyellu* by K.G. George—a pro-woman film which profiles a working woman, a

SILVER LINING FOR BLACKS

"Cinema becomes an important tool in terms of giving life to the history of blacks," said Pearl Bowser, a pioneer promoter of black American films. Bowser, a guest at the 10 IFFI, spoke at length on the emerging trends in black American cinema, that had gained critical attention only recently.

Black American films exposing the state of the blacks in the US have been produced by a number of black directors. One such director was William Greaves, an actor and dancer of the forties, whose *Ali, The Fighter* (on Muhammad Ali) was screened at the Black American Retrospective Section at the 10 IFFI. Other films like *Illusions* (directed by Julie Dash), *Body And Soul* (directed by Oscar Micheaux), *Passing Through* (directed by Larry Clark), and *Death Of A Dunbar Girl* (directed by Henry Miller) were also screened.

It was not until 1913 that the silver screen provided a forum for exposing the bitter existence of blacks in America. However, with the emergence of Martin Luther King as leader of the Civil Rights Movement in 1963, a number of black directors took to making black films. But pioneers in the field like Noble Johnson and Ralph Cooper were irrelevant till the opening of the first black film festival in New York in 1969. It was a historical breakthrough for the black directors whose message on the dire state of black Americans was actually received on the celluloid by millions.

Gradually black cinema gained world recognition and in December 1979, it was entered in the International Film Festival held in Nantes, France. Today the black directors have achieved their aim to reach a wider audience and black cinema is acknowledged with much interest and enthusiasm the world over.

THE DOCUMEDIA

The documentary film has generally received a step-motherly treatment, both from film officials and the public. Good documentaries and short films invariably get overshadowed by the glamour of feature films. In commercial theatres the documentary is rendered insignificant by the magnificence of advertisement shorts, which more than appeal to the common man's sense of entertainment.

At the 10 IFFI, however, the documentary film had a room at the top. The festival's directorate sprung a surprise by allocating a separate section called Documedia, exclusively for the screening of documentaries and short films. At last, young and independent film-makers were given a chance to display their talent.

Meera Dewan, a young documentary film-maker, was entrusted with the arduous task of organising the Documedia section. Meera had made her mark in her very first venture, *Gift Of Love*, an anti-dowry film which bagged eight international awards. Meera's *Where Are The Woods* was entered in the Documedia.

"Getting the films was no easy job," says Meera. Foreign film-makers were not interested in sending their works for a non-competitive section with very little scope for after sale. Yet, the Documedia turned out to be the bright spot in the festival. The section comprised an interesting cross-section of retrospective documentaries, accenting themes, rather than the work of individual film-makers. Selected animation films from the National Film Board of Canada (*The Boy And The Snow Goose*), Films Division's films on Indian art and artists (Akbar and Services Of Trees) and eight packages of films on 'peace', and other Central American films from the Leipzig festival, were included. Films from Latin America and by Black American film-

makers were also juxtaposed.

The purpose was to negate the indifference with which short films were received in international film festivals; the results were appalling as the audience was exposed to the best trends in contemporary documentary cinema—both in terms of thematic relevance and technical excellence.

The Latin American package needs special mention as it was the main focus of the 10 IFFI. Says Richiv Joshi of the *Daily Telegraph*: "A comprehensive selection of films from points south of the Texas border where poverty is naked and the cow boys are all called 'colonel', was one of the high points of this otherwise dismal festival."

Blood Of The Condors and *Three Crowns For A Sailor* were two powerful films which made an attempt to come to terms with reality without clouding over the form and content.

Among the Indian titles was Shyam Benegal's three-hour documentary *Nehru*. "It was very well received," recalls a dynamic Meera who was instrumental in including the film in the Documedia. Surprisingly the film was not taken into account by the Films Division.

At the seminar on the economics and realities of documentary film-making, the problems facing short film-makers in developing countries was debated upon. The Films Division was censured for its obnoxious method of allocating documentary contracts by inviting tenders. A separate film festival for documentaries and shorts was recommended by Meera.

Meera got a pat on the back from Monika Lisicka, a film promoter working with Film Polski, who had this to say: "...your Documedia was as good or even better than many other festivals." Congratulations Documedia!

neglected housewife and a kitchen maid.

Sex And Violence

The Latin American section proved popular in terms of sale of tickets. Clearly the reason was the hot Brazilian film *Dona Flor And Her Husband Not For Publication* an American film on sex orgy and another title *Parahyba Mulner Mucha* (Macho women) which deals with a liberated woman who does not tolerate social constrictions, were hot favourites. Censorship, apparently has no meaning in the film festival diction!

That brings us to the question of who sees festival films. Not the masses—definitely not. The upper-middle-class who can meet the black marketeers' demands, the media person, and of course the VIPs are the real beneficiaries. The technicians and junior staff who can learn much from good foreign films can manage to enter only by begging or borrowing passes. But the majority is left out en masse and the pretentious viewers who take pleasure in raving over the fact that they "attended an international film festival", are the ones who occupy the best seats. That's the Film Directorate's handiwork.

Yet, the trend goes on festival after festival. Good viewing and bad viewing and the usual festival *hنگame* is now part of India's cine-culture.

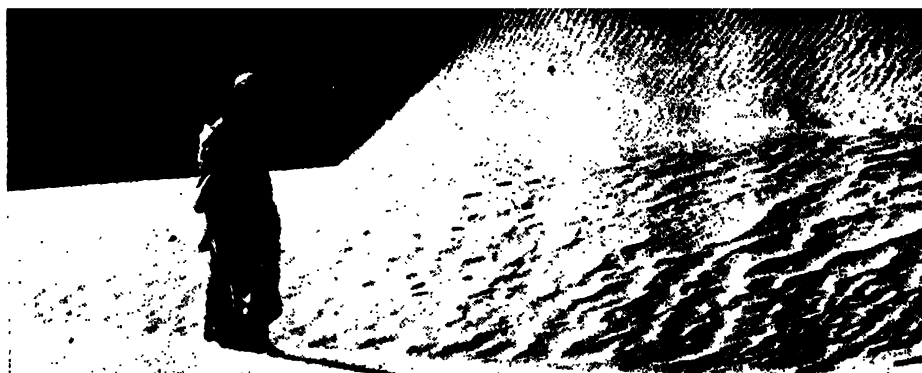
PAST PERFORMANCES

International film festivals are over half-a-century old. The world's first festival was held as part of biennale in 1932, and remained so till 1934, becoming thereafter an annual event. After World War II the concept spread on an international scale with Cannes taking the lead in 1946. Today, films have become a patent media of communication and entertainment and, most important, are a powerful force to reckon with as instruments of social and political change. That accounts for the enthusiasm with which over 200 festivals are celebrated round the globe.

The major competitive film festivals as recognised by the International Federation of Film Producers Association (IFFPA) are held in Berlin, Cannes, India, Manila, Montreal, Venice and Moscow alternating with Karlovy Vary. In India, the first International Film Festival was held from Jan 24 to Feb 1, 1952 in Bombay. This was a non-competitive festival with 21 participating countries who entered 40 feature films and 100 short films.

The second non-competitive film festival was held in New Delhi from Oct 27 to Nov 9, 1961 and was organised by the Ministry of Information and Broadcasting in close cooperation with the Film Federation of India. About 90 features and 50 short films from 38 countries were entered in this festival.

The third competitive International Film Festival of India (3 IFFI) was held from Jan 8-21, 1965 in New Delhi. It was recognised as an 'A' class festival at par with those held in Cannes, Berlin, Venice, Karlovy Vary and Moscow by IFFPA. About 30 countries participated in the festival entering 19 feature films and 20 short films. A jury headed by Satyajit Ray awarded the top prize, the Golden Peacock, to the Sri Lankan feature film *Gam Peraliye* (A Family Chronicle). The Golden Peacock for the best



An oasis in the desert: *Suhasini Mule* in *Bhuvan Shome* which was acclaimed by critics at the 4 IFFI.

short film was given to Cuba's *Cyclone*.

The 4 IFFI was held after a span of about five years. The festival was again organised in New Delhi from Dec 5-18, 1969. In the competition section, 20 feature films and 18 short films were entered and 32 countries participated in the festival. The jury headed by Raj Kapoor awarded the Golden Peacock for the best feature film to the US entry *The Damned. Taking Off At 1800 Hours* from Cuba was awarded the Golden Peacock for the best short film. It is notable that India's *Bhuvan Shome* won laudatory remarks from critics. A retrospective of Indian cinema (1913 to 1969) was one of the sidelights of this festival.

The 5 IFFI was held in New Delhi from Dec 30, 1974 to Jan 12, 1975. About 46 countries with 142 feature films and 69 short films participated in the festival. It was decided that the festival be held regularly in alternate years. A permanent insignia, a stylised representation of a peacock, India's national bird and a permanent logo of the festival *Vasudhaiva Kutumbakam* were initially adopted at this festival. The jury, headed by Satyajit Ray, adjudged the *Dreaming Youth* (Hungary) and the *Automatic* (Czechoslovakia) as the best feature and short films respectively which were awarded the Golden Peacock. Apart from the customary awards, the CIDALC award for the Indian feature film *Garam Haws* and the UNICRIT award for *The Brutalisation Of Franz Blum* (GDR) and *Kaadu* (India) were given away.

Sponsored by the Film Finance Corporation, organised by the Directorate of Film Festivals Information & Broadcasting Ministry in collaboration with Indian Motion Pictures Export Corporation (IMPEC) and Indian film industry, the 6 IFFI was held in New Delhi from Jan 3-17, 1977. About 53 countries with 249 films participated in the competition, information and short film sections. Japan's *Mon And Ino* and India's *After The Silence* won the Golden Peacock for best feature and short films respectively. The festival jury was headed by Satyajit Ray. Silver Peacock for the best actor, actress and director were awarded for the first time.

The 7 IFFI was held in New Delhi from Jan 3-17, 1979. A total of 169 feature and short films from 35 countries were received for screening in four sections, viz. competition, information, tribute and Indian Panorama. In the tribute section films made by three celebrated directors—Claude Chabrol, Andrei Tarkovsky and John

Ford were screened. The Indian festival is the only one to have organised this posthumous tribute to the American veteran Ford. The Indian Panorama consisted of 21 feature films selected from various Indian languages. This time the international jury was headed by Ousmane Sambene of Senegal, the first non-Indian to head the jury. Two women members were also on the jury for the first time. The jury adjudged *Hungarians* (Hungary) as the best feature and *An Encounter With Faces* (India) and *Olympic Games* (Poland) as best short films for the award of Golden Peacock. The best actor, actress and director were also chosen for the award of Silver Peacock. For the first time a Special Jury Prize was given for the Indian film *Gaman*.

The 8 IFFI was held in New Delhi from January 3-17, 1981. A record number of 61 countries with 167 feature and 64 short films participated in the festival. Besides the competition and information sections, there was a foreign retrospective section, Indian panorama and a market section. Out of 24 feature films and 13 short films selected for the competition section, the Golden Peacock for the best feature film was shared by *The Unknown Soldier's Patent Leather Shoes* (Bulgaria) and *Aakrosh* (India), while *A Period Of Transition* (India) received the Golden Peacock for the best short film. Silver Peacock awards for best actor, director (feature and short) and two Special Jury Prizes were conferred by the jury.

The 9 IFFI was organised by the Directorate of Film Festivals under the NFDC in New Delhi from 3-17, 1983. Over the years, Indian festivals have become a major forum for the Third World cinema with as many as 22 Third World countries participating in the festival with over 200 feature and short films. Apart from competition, information, tribute, Indian Panorama and film market sections, a new section for the screening of 16 mm films was added. In the competition section, 24 feature and 10 short films were screened. However, the festival was dampened by the fact that no film was found upto the mark for winning the Golden Peacock. The Silver Peacock for feature films were given by the jury headed by Lindsay Anderson to the best actor, actress and director. Two feature films were selected for Special Commendation by the jury. In the short film section the Silver Peacock was awarded to the best director. A Special Jury Prize was given in this category.

Prabha Gopal, New Delhi

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1. How many times has the Himalayan Car Rally been held?
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3. With which sport is the Auty Trophy associated?
4. Name the titles of the three books written by Gavaskar.
5. Who wrote *The Fast Men* and *The Slow Men*?
6. Who is the last bowler to take his tally of Test wickets to 250?
7. Who are the holders of the Wightman Cup in Tennis?

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● Print the answers neatly in capital letters along with your name, age and address. Each crossword must be pasted/clipped to a larger piece of paper.

● You may send in any number of entries, but each must be numbered accordingly and accompanied with its respective COUPON.

● Though all your entries will be included in the draw of lots, you will be entitled to only one prize—the highest in case you're getting more than one.

Closing date for the two contests: March 25.

Address your entries to: The Editor, Career & Competition Times, 10 Daryaganj, New Delhi-110 002.

Solutions to this issue's contests will be published in May.

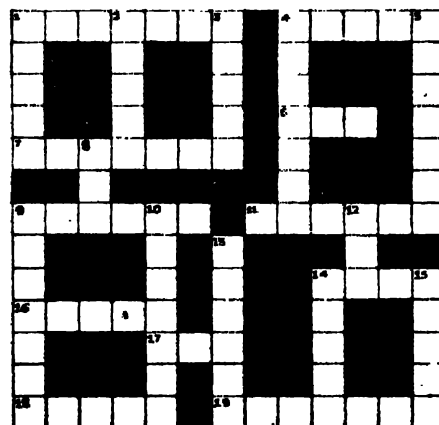
ACROSS

1. This world-renowned statesman received the Jawaharlal Nehru Award for International Understanding for 1983 (7).
4. The American artist who introduced the Boy Scout movement in the US (5).
6. The fifth sign of the zodiac in astrology (3).
7. Mountain pass between the Rhaetian and Lech Alps in Austria which is pierced by one of the longest railway tunnels in the world (7).
9. A heavy-jawed hound (6).
11. A Roman Catholic priest who, as Chancellor of Austria from 1922-24, stabilised currency (6).
14. You say one hundred thousand or one—(4).
16. An Indian term for a wayside inn (5).
17. A result of the rotation of the earth round its axis (3).
18. Better known as Marilyn Monroe (5).
19. *Izvestia* is a—newspaper (7).

DOWN

1. This lake in central Uganda contains the only navigable sections of the Victoria Nile (5).
2. Nickname for male comedian who does feminine impersonations, goes up (5).
3. The first two American astronauts to take a ride in the first US space shuttle Columbia (launched in April 1981), were Robert Crippen and John—(5).
4. Type of French medieval song with verse

5. A unit of the intensity of sound (7).
8. Distinguished British scientist, with many inventions to his credit connected with wireless, television, coal and petrol engines, anti-aircraft and anti-tank rocket apparatus (3).
9. Shakespeare wrote *The Merchant Of Venice* but he wrote *The Stones Of Venice* (1, 6).
10. One of a family of spiny, termite-eating mammals, allied to the platypus, found in New Guinea and Australia (7).
12. Air India is analogous to—of Pakistan (1, 1, 1).
13. Official language of the English Hungarians whose official name is Magyarorszag (6).
14. This gulf in N.W. Mediterranean, on the coast of S. France lies between Pyrenees and Toulon (5).
15. The fifth of the Abbasid Caliphs of Baghdad immortalised in the stories of the *Thousand And One Nights* as the Caliph presiding over a splendid court (5).



SOLUTIONS... SOLUTIONS... SOLUTIONS

SPORTS QUIZ-38

1. Bob Willis, Ian Botham & Fred Trueman
2. 1979-80 in New Zealand
3. Kanga cricket
4. All gold medallists in judo in the 1984 Olympics
5. 100 m, 200 m, long jump, 4 X 100 m relay
6. Same as Owens

First Prize (*all-correct/one-error*): 1. Devendra Kumar, Dehra Dun 2. Deepak K. Thar, Mijikajan P.O. (Assam)

Consolation Prize (*one-error*): 1. M. Suresh, Bangalore 2. S. Vasantha Kumar, Bangalore 3. R. Saratha, Kallakurichi (Tamil Nadu) 4. Sunny Pandita, Srinagar 5. Sreepathy S., Tripunithura (Kerala)

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KENWORDS-38

Across: 1. Copyright 7. Euler 8. Adige 9. Haber 11. Enema 13. Napier 14. Earwig 16. Yeats 18. Tiber 20. Cacao 21. Rhett '22. Thackeray

Down: 2. Opera 3. Radar, 4. Gemini 5. Tepee 6. Trafalgar 9. Henry Ford 10. Enot 12. Nervi 15. Lacuna 17. Scott 18. Tomsk 19. Eucla

Winners

First Prize (*all-correct*): 1. Dilip K. Mukhopadhyay, P.O. Rahara (West Bengal) 2. Sanjay Sinha, Patna

Consolation Prize (*all-correct*): 1. Siddhartha Chatterjee, New Delhi. 2. L.G. Mohan Rao, Kakirada 3. Maneesh Jhawar, Pilani 4. G. Ganesh, New Delhi 5. Harvinder Singh, Agra

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PICK OF THE MONTH

THE FATEFUL NUMBER SIX

Certain numbers are very important in the life or the destiny of a person. The number six, dominated the entire life of Indira Gandhi.

Indira Gandhi's first name, surname, the name of her husband, Feroze, her son, Sanjay, his wife Menaka, Mrs Gandhi's childhood heroine, Jeanne, and her country, France, each consists of six letters. She spoke six languages: English, Hindi, Bengali, Gujarati, French, and German. The name of her father Jawaharlal Nehru, and the house where she stayed with him, Teen Murti Bhavan, each have 15 letters; $1+5=6$. Her blood group is "O", the 15th letter of the alphabet.

Her political career was no different. She became the President of the Congress Party in the year 1959 ($1+9+5+9=24$; $2+4=6$).

The age at which she became the President of the Congress Party was 42 ($4+2=6$).

The year in which she became the Prime Minister of India was 1966. (The last two sixes are



worth noting. This could happen only once in a 100 years).

The date on which she became the Prime Minister was January 24 ($2+4=6$). The year when she won her most sweeping electoral victory was 1971 ($1+9+7+1=18$, i.e. $6+6+6$). 1971 was also the most important period in her whole political career when she stood at the peak, won the war against Pakistan and played a major role in the liberation of Bangladesh.

The only time she lost the elections in her whole political career was 1977 ($1+9+7+7=24$; $2+4=6$).

Her age when she lost these elections was 60 years ($6+0=6$).

($1+9+8+0=18$; $6+6+6$). The number of Lok Sabha seats contested by her party in 1980 was two-thirds which is 66.66%. Her son, Sanjay, died in an air crash in

the month of June, which is the sixth month of the year, and the year in which he died was also 1980. The number of years for which she was Prime Minister of India was 15 ($1+5=6$).

The place where she stayed as the Prime Minister of India, 1, Safdarjung Road consists of one numeral and 14 letters, that is 15 altogether ($1+5=6$).

The state which gave her the toughest challenge of her career was Punjab (6 letters).

The most important person in the Khalistan movement, who got killed in the army action taken by her in the month of June (the sixth month) and the person whose death was stated to have been

Jarnail Singh Bhindranwale whose name is made up of 24 letters ($2+4=6$).

In the assassination, too, we find a most uncanny domination of the number six. The first assassination of an Indian leader was of Mahatma Gandhi in the year 1948. The second assassination of a major Indian leader was that of Mrs Gandhi in 1984 (1948 and 1984 have the same figures only 4 and 8 have changed positions). The difference between the two assassinations is 36 years (which is 6 times 6).

Mrs Gandhi's age at the time of her assassination was 66 years. She is the 15th ($1+5=6$) head of state or government to be assassinated after World War II. The official news of her death was broadcast over AIR at 6 p.m. She was killed by a bullet (6 letters). The number of days of national mourning for her death was 12 ($6+6$).

The last person with whom she was to have an interview was Peter Ustinov (12 letters, that is, $6+6$). The state which she visited last was Orissa (6 letters).

Such a predominance of this number cannot be dismissed as mere coincidence.

Courtesy *The Sunday Statesman*

FATAL PROPHECIES

People Who Predicted Their Own Deaths

St Malachy, Irish: Ireland's greatest prophet, predicted both the time and place of his death - All Soul's Day at Clairvaux, France

Joan of Arc, French: When she was captured by English soldiers, Bishop Cauchon, one of the judges who presided over her trial, asked Joan when she thought she would be delivered from imprisonment. She told him to return in three months to find out. On May 30, 1431, three months later to the day, Joan of Arc was burned at the stake and "delivered" from imprisonment.

Thomas Wolsey, English: When Cardinal Wolsey failed to convince Pope Clement VII to grant Henry VIII of England an annulment of his marriage to Queen Catherine, his fate as a leading statesman was sealed. He was arrested. Down with dysentery, Wolsey had to rest at a monastery in Leicester. He remarked to the Abbot on entering the monastery: "I am come to lay my bones among you." On the morning of the second day of illness, Wolsey asked what time it was. When told it was 8 o'clock, he said: "That cannot be, for at 8 o'clock, you will lose your master." The following day, precisely at 8.00 a.m., Wolsey died.

Spencer Perceval, English: PM of Britain from 1809 to 1812, Perceval foresaw his own death in a dream he had on the night of May 10, 1812. In the dream, he was accosted in the lobby of the House of Commons by a man wearing a dark green coat with brass buttons. The man appeared half-crazy and waved his pistol menacingly towards Perceval. There was a shot

and everything went black. Perceval told his friends and family about the dream, but despite their warnings, left for work as usual. As predicted, he was shot and killed by a man wearing a green coat with brass buttons in the lobby of the House of Commons. Ironically, the assassin had intended to kill another member of the House of Lords, who had ruled against him in an embezzlement suit. Perceval's murder was a case of mistaken identity.

Abraham Lincoln, American: On the evening of 1865, the President was in a particularly melancholic and quiet mood. He spoke philosophically about dreams for a short while then mentioned a recent one that continued to disturb him. He went on to describe the dream.

There seemed to be a death-like stillness about me. Then I suddenly heard subdued sobs as if a number of people were weeping. Determined to find out what was going on, Lincoln wandered from room to room of the White House until he reached the East Room. There, he saw a corpse wrapped in funeral vestments, surrounded by mourners. "Who is dead in the White House?" Lincoln demanded. "The President. He was killed by an assassin," came the reply. This was followed by a loud wailing which woke Lincoln from his dream. Only a few days after Lincoln related his dream, he was shot and killed by John Wilkes Booth while attending a play at Ford's theatre.

Mark Twain, American: America's most beloved humorist was born in 1835 on the same day that Halley's Comet appeared in the sky. Seventy-three years later, in anticipation of the return of the comet, Twain said to his friend and fellow-writer A.B. Paine: "I came in with

Halley's Comet in 1835. It is coming again next year, and I expect to go out with it. It will be the greatest disappointment of my life if I don't go with Halley's Comet. The Almighty has said, no doubt: 'Now here go those two unaccountable frauds; they came in together, they must go out together.'" Twain was not to be disappointed. Halley's Comet lit up the sky on Apr 20, 1910, and Twain left with it the following day.

Arnold Schonberg, Austrian: The famous composer was obsessed with the number 13. Born on Sep 13, he became convinced in later life that he would die during his 76th year, because the numbers 7 and 6 totalled 13. Even worse, Jul 13 of that year fell on Friday, a traditional harbinger of bad luck. That day, Schönberg remained in bed, firmly believing that his end would come soon. The day passed uneventfully, however, and late that night his wife visited his bedroom to reassure him that it was foolish of him to have worried. As she entered the room, Schönberg uttered the word 'harmony' and died—at exactly 13 minutes before midnight.

Grow Hunt, American: A Pennsylvania dairyman, Grow Hunt was known for his antics and his boisterous spirits. When Hunt's wife died in 1923, he ordered two monuments to be built—one for her and one for himself. On his monument, he requested that the year of his anticipated death, 1938, be inscribed. Although the workman protested, Hunt had his way. Just as he predicted, Hunt died 15 years later in 1938. He was buried next to his wife in a cemetery in Austinburg where the markers still stand.

K.V. Ravi Chandra, Vijayawada
Compiled from *The Book Of Predictions*

From The Club Desk

Your response to the renewal of Club Desk has been delightfully overwhelming. Several new clubs have been added to the CCTimes Clubs list which reflects the enthusiasm and initiative you young people possess. But the mere forming of clubs is not enough. So start activating your clubs—and keep us fully informed about the activities your clubs are engaged in.

We have, however, received more letters asking about the rules and regulations to be observed while forming a CCTimes Club. And for those people—a CCTimes Club is a club formed by you exclusively through dint of your efforts and enterprise. If you are desirous of forming one, just look around for others as enthusiastic about improving their personal and career prospects—join together and form a club. No enrolment fee of any sort is required. Give your club a name and inform us so we can register your club. Send us the names of your members too and we'll send you membership cards. And thereafter, organise activities designed to encourage the development of your overall personality in any way, e.g., group discussions, debates, quiz programmes. If you are desirous of more details, refer to our Jan '85 issue.

Some of you have also enquired about your membership cards. Membership cards upto the letter 'M' have already been dispatched. Those who haven't received them yet please inform us so that necessary action can be taken.

Now onto the activities of a few clubs who have sent in their Club News to us. The Thrill Seekers Club in Amritsar organised an on-the-spot creative writing competition including essays, short stories and poetry. The competition was open to all students of their district. Then, the CCTimes Club in Chaudhanana (Bhojpur) held a quiz contest related with scientific inventions, discoveries and cricket. It also organised a discussion "Importance of forming a CCTimes Club in the context of the present day competitive world of jobs and careers." And the Akhil Bharatiya Vikas Sangathan, a CCTimes Club in Meerut, is engaged in eye-donation campaigns under the Times Eye Research Foundation. Since none of the clubs has really organised novel activities, we don't think any club merits the "Club of the Month" title this time. But don't be disheartened. Keep working and informing us—and please try to send us accompanying photographs. In fact, preference will be given to such letters and so you'll stand a better chance of winning too. Good luck for the month ahead.

THE LETTER 'D'

Delhi

1. Dhanaya Club
1/11, Noida, Ashram, N.
President/Secretary: Vinay
M. No. D-2/4
2. Time Club
C/o S.P. Mittal, Connaught Place, New
Delhi-110 015
President/Secretary: Sanjay Singhani
M. No. D-2/5
3. Time Club
12/7, Sector III, Pushp Vihar, New
Delhi-110 017
President/Secretary: Ravish Jorja
M. No. D-2/6
4. CCTimes Club
C/32 C.C. Colony, Delhi-110 007
President/Secretary: Nareesh Gupta
M. No. D-2/7
5. Betwixt and Between Group
B-17, New Krishna Park, New Delhi-
110 018
President/Secretary: Rajesh Sahni
M. No. D-2/8
6. CCTimes Club
40 A, SRCC Hostel, Delhi University,
Delhi-110 007
President/Secretary: Rabindra Nath Khosla
M. No. D-2/9
7. CCTimes Club
Room No. 53, 3rd Floor, Western Wing,
Tis Hazari, Delhi-110 054
President/Secretary: R.P. Kapoor
M. No. D-2/10
8. CCTimes Club
46/1/14, Joshi Road, Karol Bagh, New
Delhi-110 005
President/Secretary: Meenakshi Sharma

9. CCTimes Club
543, Sector III, R.K. Puram, New Delhi-
110 022
President/Secretary: Balwinder Joet
Singh
M. No. D-2/12
10. CCTimes Club
C/o D.C. Pat
G-126, Kaikaji, New Delhi-110 019
President/Secretary: Barenya Das
M. No. D-2/13

Dhanbad

1. CCTimes Club
Block Colony (Family Welfare Dept.), Ar &
PO Chas Dist. Dhanbad-827 013.
President/Secretary: Narendra Kumar
Verma
M. No. D-3
2. CCTimes Club
Room No. 141, Hostel No. 19 B.I.T.
Sindri, Dhanbad-828 123
President/Secretary: Ratan Kumar Singh
M. No. D-3/1
3. CCTimes Club
Hostel No. 18, Room No. 101, B.I.T.
Sindri, Dhanbad-828 123
President/Secretary: B.K. Upadhyay
M. No. D-3/2
4. CCTimes Club
18/204, B.I.T. Sindri, Dhanbad-828 123.
President/Secretary: Atulva Jyoti
M. No. D-3/3
5. CCTimes Club
19/30 B.I.T. Sindri, Dist. Dhanbad-
828 123.
President/Secretary: Amrendra Kumar
M. No. D-3/4
6. Katras CCTimes Club
C/o Dr P.C. Gupta

7. Gupta's Clinic, Post Box No. 4, P.O.
Katras, Dist. Dhanbad-828 113.
President/Secretary: Sujoy Gupta
M. No. D-3/5.

8. CCTimes Club
Convener, Students Club, H. No. 19, R. N.
84 B.I.T. Sindri, Dist. Dhanbad.
President/Secretary: Shailendra Kumar
Mishra
M. No. D-3/6.

Durgapur

1. CCTimes Club
E-28, V.K. Nagar, Durgapur-713 210.
President/Secretary: Sourit Sen
M. No. D-4.
2. CCTimes Club
Ranapratap Youth Club
23/29, Ashoke Ave, Durgapur-713 204
President/Secretary: Biman Ghosh Ray
M. No. D-4/1.

Dehra Dun

1. CCTimes Club
2/1 D.L. Road, Dehra Dun.
President/Secretary: Anup Dhingra
M. No. D-5
2. CCTimes Club
Ranjit Section, R.I.M. College, Dehra Dun
Cantt-248 003.
President/Secretary: S.D. Mishra
M. No. D-5/1

THE LETTER 'F'

Faridabad

1. CCTimes Club
404/17, Faridabad
President/Secretary: Yogesh Saxena
M. No. F-1

THE LETTER 'G'

Ganjam

1. CCTimes Club
Bahana Pati, Bada Talank P.O., Chikoti Via
Ganjam Dist-761 010
President/Secretary: Prasad Kumar
Padhi
M. No. G-1
2. CCTimes Club
Flat 4, Sabat Nivas, Shanti Nagar,
Berhampur, Dist Ganjam-760 004.
President/Secretary: V. Balaraju
M. No. G-1/1.

Gauhati

1. CCTimes Club
C/o Jatni Hazanka IAS, Ulubari Chariali
(Jibagiri) Gauhati-781 007.
President/Secretary: Abhijit Hazanka
M. No. G-2.
2. CCTimes Club
Qr. No. 42, G.U. Campus, P.O. Jalukbari,
Gauhati-781 014
President/Secretary: Debabrata Maitra
M. No. G-2/1

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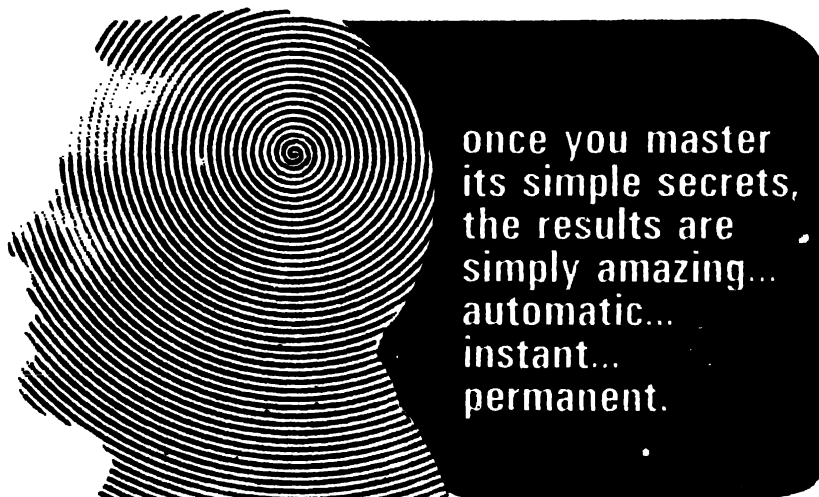
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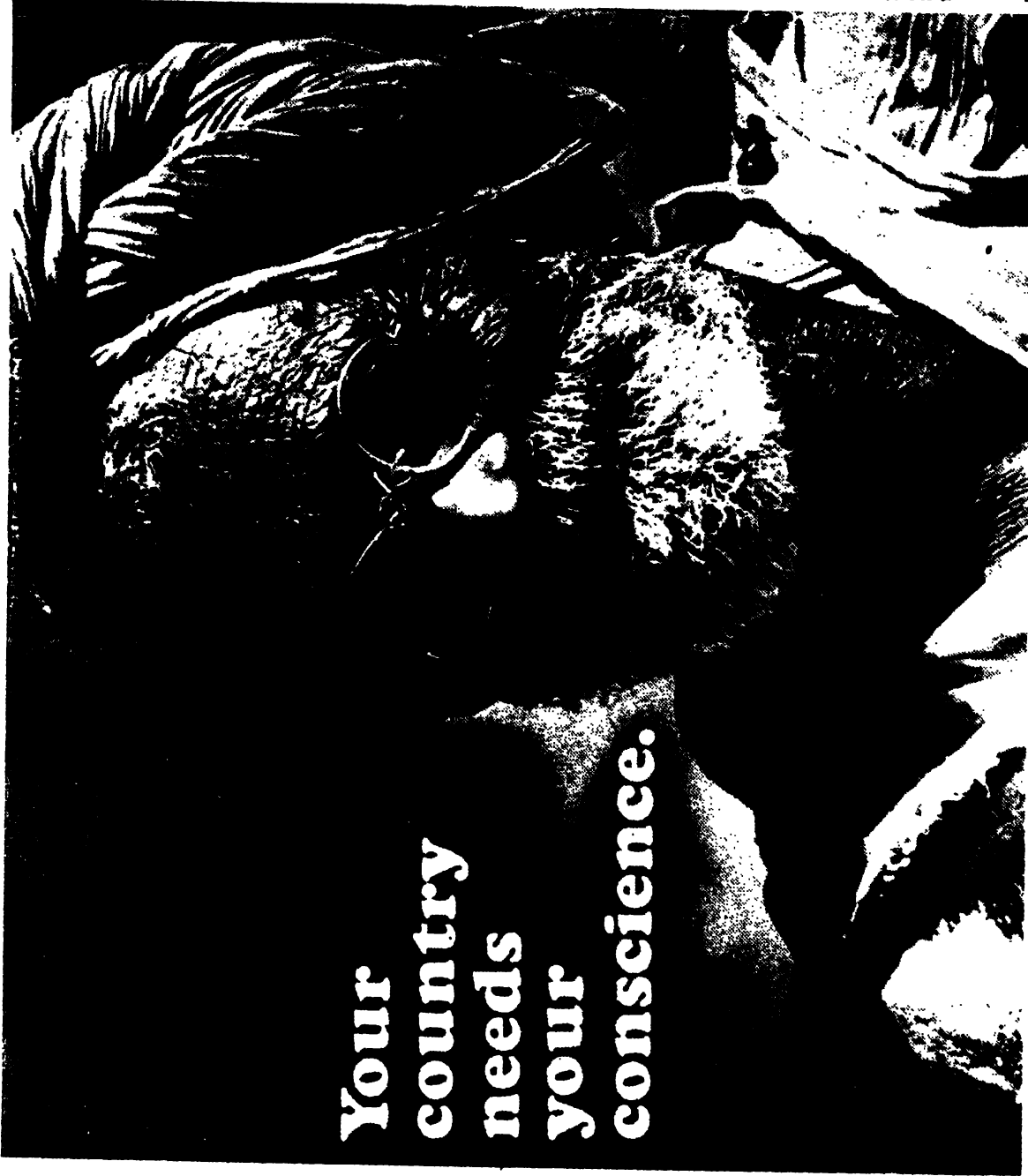
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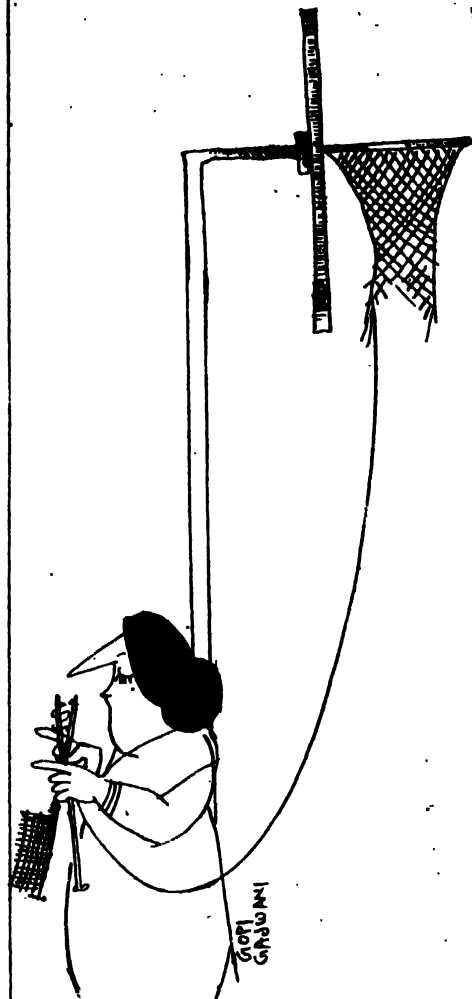
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LETTERS

History Repeats Itself

India, today, bears an uncanny resemblance to the last years of Aurangzeb's reign. Casteism, regionalism and communalism—important factors in the unmaking of the Mughal Empire—are raising their ugly heads. Is history repeating itself?

Dinesh Kumar Chanchal, Gaya

Best Letter : Rs 40

Vote For The General?

Was there a general election in Pakistan or simply a General's (Zia-ul-Haq) election?

V.K. Sinha, Varanasi

Prize-winning Letter : Rs 25

The Useful Ages

Down The Ages (Mar '85) was a useful exercise in Indian history. It is an excellent ready reckoner for objective-type exams.

Bhooshan Shende, Nagpur

Timely Education

Thanks for educating us on the importance of time (*Hello Folks*, Feb '85). In India we have men, material and money, all lying in a chaotic condition. If we design things suitable to our country we could overcome poverty. The main reason why most of us, equipped with the required calibre, have not been able to utilise time constructively.

Narottam Kela, Sanawad (MP)

The importance of time management should be taught right from childhood so that when a child grows up, this quality becomes an intrinsic part of his or her personality. Parents can be very helpful in this respect by practising what they should consistently be preaching.

Sanjay E. Silas, Agra

It's Great!

Nehru was born great, Indira achieved greatness and Rajiv has greatness thrust upon him.

Harshvardhana, Darbhanga

Free For All

Equal opportunities for unequal? Or? Well, that's Sanjay Kumar's way of helping those restricted from appearing in competitive exams.

Institutions of higher learning in India, and abroad, conducting entrance exams for admitting students into their respective institutions, have set standards of minimum marks essential for being eligible to take the exams.

But according to our reader, as long as the candidate fulfills the basic qualifications necessary, marks should not restrict him from competing with the others.

How would you see his point? May be you have other ways of looking at the problem. Do wake your grey cells a little and send in your views, in about 150 words, to our *Letters* page. We shall publish them in our issue.

Top Secret

Things have come to such a pass (*Net Around Spy Ring*, Mar '85) that TOP secret only means Top Official Purchasable secret.

Vinod Kumar Sinha, Varanasi

(Un)reserved Seats

The advertisements need no longer specify the percentage of reservation for SCs/STs. They can just specify the percentage of left-over seats for the majority.

S. Aruna Chari, Baroda

The anti-reservation stir in Gujarat is nothing but the failure of the state governmental machinery. The government neither remains loyal to backward people nor avoids them completely.

Nilesh Ganatra, Rajkot

The politicians are not thinking of the adverse effects of reservations. Indirectly they are provoking and increasing laziness and illiteracy, which in turn could weaken the educational standards of our country. At least the policy of reservation of seats in professional courses must be reviewed immediately.

O. Seshasai, Kakinada (AP)

Danger! Beware!

Industrialisation and development are ways of slow poisoning; men should be aware of their implications.

Anand Mukherjee, Satna (MP)

The Renaissance

Right now we need a country wide debate on how to bring about all-round moral and ethical renaissance.

Rajiv Ranjan, Dhanbad

India is passing through a critical phase and all eyes are fixed on her destiny, irrespective of the election results. Patriotism is not the monopoly of a particular sect or community. It is nationalism that creates patriotism which has become outdated due to the growth of internationalism and universalism.

R. Surendranath, Nellore

Honesty Displaced

"A good officer is one who is honest," says the former PNB Chairman and MD, S.L. Baluja (Nov '84). How come he has now been displaced? Is it for showing his brand of honesty?

K.J. Johny, P.O. Valapad, (Kerala)

Technical Waste

The technical graduates who compete for the IAS are only wasting their hard earned technical skill. They must be advised not to waste their skills in browsing through official files.

Subrat, New Delhi

Super Social Animals?

Despite repeated requests the superpowers are not inclined to stop accumulating nuclear weapons. In an environment, where even a wild animal can smell as petty a thing as a bone, why can't the superpowers smell the destruction of mankind as a result of a nuclear war? Is it

because they are 'social' animals?

Yogesh Kalra, New Delhi

Raising Teachers?

The designers of the new education policy should see that competitive exams are held for the selection of teachers, throughout the country, and the job of teaching is made as lucrative as any other coveted job, because today those who don't get anywhere become teachers. This trend must change.

Rajiv Kumar, Ranchi

The Budget Boomerangs

The sharp increase in the prices of kerosene and gas, envisaged in the budget, would affect the middle and the lower middle classes. Further, the increase in the excise duty on writing paper and printing paper will affect the book trade and also the student community. Besides, the rise in the excise duty of cement will affect house construction and also boost the cost of ongoing projects.

K. Mohan, New Delhi

Victory Of Democracy

The recent state Assembly elections have once again proved the astonishing maturity of Indian voters who have shown that they cannot be taken for granted. And the victory has been that of our cherished democratic norms.

Deepak Kapoor, Rohtak

In the absence of a national alternative to the Congress (I), our Democracy is drifting helplessly towards regionalism. And once regionalism sets in, nationalism will be buried for good. Therefore, only such political parties should be constitutionally recognised as can field candidates for at least 3/4th of the seat in the Assembly and the Parliament. This will also force the opposition parties to unite and form a national alternative to the Congress (I).

Kinshukanand, Netarhat

Errata

Current Events : *National* (Mar '85) wrongly stated that the Assembly elections in MP were held on Mar 5. They were actually held on Mar 2.

The Quarterly Review (Mar '85) has misspelt the name of the ex-Lt Governor of Delhi. It is P. G. Gawai and not P. S. Gawai.

The value of the Nobel Prize money is \$192,000 and not Rs 1.92.000 as wrongly stated under the columns of G.K. (Apr '85).

The name of D.G. Phalke has been wrongly spelt as P. G. Phalke (Apr '85).

The errors are regretted.—Editor

WIN A PRIZE

Do our articles provoke you to say something? Is there anything else you feel strongly about? Here's your chance to say it and make some money in the bargain. The best letter will win Rs 40, the second Rs 25.

So, why don't you get cracking?

Your letters should be legibly written/typed, not exceed 200 words and include your full name and address. We may edit them for purposes of clarity or space.

Hello folks...



Creativity, the quality of employing a playfully exploratory rather than a mechanical process of problem solving, is very necessary to be a success in life. Unfortunately, many are unaware of this and, therefore, make no efforts to develop creativity. They are, thus, unable to find solutions that are both novel and useful.

Realising the importance of creativity, I searched for some material on the subject. Fortunately, I could lay my hands on *Fourth Eye* by Pradip N. Khandwalla (A.H. Wheeler and Co. (P) Ltd., Allahabad). The book aims at helping people "transcend their limitations and actualise their creative potential". It examines various aspects of creativity and the techniques of finding better solutions to problems.

Creativity is not just one ability; it is a cluster of abilities. The various abilities are: originality, which measures the ability of a person to come up with a large number of brief solutions to one given problem; flexibility, the ability to provide a large variety of solutions; to respond to a problem from a variety of viewpoints; and to use a variety of approaches in solving problems; originality, the ability to come up with unusual but appropriate responses (a related ability being coming up with novel relationships between ideas); problem sensitivity, the ability to sense problems, to notice the unexplained, the unsatisfactory or the incongruent; the ability to grasp the causes and visualise the consequences; the ability to elaborate on a theme; which is indispensable in putting a creative idea to work; and lastly, the ability to restructure problems, to see beyond the superficial features of problems and identify what the real problem is. These abilities are not all found in equal measure in the same individual.

Creativity in many persons is inborn. However, those who are serious and

diligent can develop this quality. It needs a high degree of motivation, appropriate training and an encouraging environment. High degree of success can be achieved through the creation of a cultural environment. This can be done by taking up some creative hobby or activity, by finding creative friends and, if possible, by getting into a more creative job or occupation.

There are several ways of promoting and planning creative thinking. Certain techniques suggested by the author are:

- Structure the problem so that it is well understood.
- Separate the phase of idea production from idea evaluation. Do not evaluate or criticise ideas, whether one's own or another's, during the time of their articulation.
- Ideate copiously. Churn out a large number of ideas, firstly because this heightens the possibility of coming up with some really good ones and secondly to let one idea lead to another and still another, and so on, like a chain reaction.
- Create constructive psychological strength by continuously moving from the familiar to the unfamiliar situations and back to the familiar.
- Force wide shifts of perspective by asking such questions as what would be the opposite of the current solution; how could we magnify or unify the solution or is there a radically different way of looking at the problem? Having generated a large number of ideas or solutions, identify the ones with the greatest potential by some sort of assessment or selection procedure.

Khandwalla has mentioned a number of techniques of creative thinking. Brainstorming is the most important. It is based on the principle that quantity begets quality; so, to get many ideas it is necessary to suspend evaluation of ideas during the idea generation phase. However, brainstorming is useful as a technique where the problem has a unique solution that can be reached by analysis. Although brainstorming is done in groups, it can also be done by individuals. Brainstorming is not just a technique, it is a culture. It is a clear message that for divergent thinking at least, democratic and collaborative culture works. Brainstorming increases self-confidence.

The significant technique of creative thinking is attribute listing. It is useful for designing and redesigning a specific activity. In attribute listing, the attempt is first made to list the basic attributes or properties or specifications of a particular object or activity. Then an attempt is made to

generate alternatives to the current attributes or specifications.

The third technique is synectics which has been adapted from the Greek word *synecticos*, meaning 'fitting together diverse elements'. It is a remarkable technique of solving problems at the group level, and to a non-initiate, it looks like a mad method of finding solutions.

Creativity can be improved with the help of several tools.

- Effective listening: Listen carefully and patiently to others.
- Empathy: Suspend your critical faculties while the other person is struggling to express himself.
- Clarificatory questions: If the problem being discussed is not very clear, try to bring the problem into sharper focus by asking questions such as what do you see as the problem or what do you see as the consequences of the present situation?
- Feedback: Find out the feelings and opinions of different persons; for this you must be in a receptive frame of mind. Share your feelings and views with others in a factual, non-evaluative manner.
- Evocative questions: Do not ask hostile questions. Ask questions that will make the other person come out with his own ideas and experiences which can lead to creative solutions.
- Analogies: A problem can be seen from a fresh perspective with the help of analogies. For example, if the problem is concerning Engineering, analogies from Biology can be sought. When talking to others for feedback, try to find out parallel situations.
- Converging of a solution or conclusion:

Steps one to four above help the person articulate his problem more clearly. Steps five and six can help the person in handling any divergent and creative thinking. It is often useful to help the other person get a sense of closeness or conclusion by helping him move to a satisfactory choice. Helping with frank feedback and information, helping in the evolving of criteria for evaluating alternatives, applying these criteria, should there be a conflict, planning actions that will increase the probability of successful execution of a chosen alternative, and so on will be very useful in this phase of interpersonal interaction.

R. Khandwalla

TEST YOUR WORD POWER

BY AYCEE

The per-fect WORD. Is it on the tip of your tongue or is it hidden in the back of your mind? Either way, we agree, it's an eloquent problem.

And so each month we bring you this column, tailor-made to suit your requirements. Twenty new words complete with their meanings and usage.

But what's so unique about *our* word power exercise? The 20 sentences are information-packed and fact-laden—facts which are often not easily available. A weighty two-in-one package, wouldn't you agree?

For the word or phrase you believe is *nearest in meaning* to the key word.

1. **abyss:** A. without limits B. very deep pit C. elasticity D. disturbance
2. **animosity:** A. disagreement B. opportunity C. hostility D. revenge
3. **baffle:** A. to puzzle B. deceive C. tease D. behave clumsily
4. **barter:** A. beaten mixture of flour B. short, thick stick C. utensil used for beating D. act of exchanging
5. **dwindle:** A. to become less B. trickle forth C. pine away D. become less active
6. **etiquette:** A. tact or skill B. conventional code of good manners C. a measure or norm D. style
7. **fret:** A. to worry B. waste C. fill with terror D. persist
8. **futile:** A. sick B. useless C. peaceful D. hazy
9. **genocide:** A. the assassination of a king B. the murder of one's child C. the extermination of an entire race D. the murder of one's father
10. **heretic:** A. one who speaks in favour of a cause B. one in favour of violent changes C. one holding opinions contrary to established doctrines D. old-fashioned person
11. **irrelevant:** A. not endowed with reason B. not related to the subject C. not showing respect for sacred things D. that cannot be proved false
12. **lucrative:** A. skilful B. profitable C. resourceful D. smooth
13. **maelstrom:** A. the great world B. strong conviction C. rainproof coat D. great whirlpool
14. **reprieve:** A. a repeated musical phrase B. safety C. respite D. the death penalty
15. **savour:** A. to enjoy with pleasure B. soak with moisture C. satisfy fully D. keep safe
16. **secede:** A. to withdraw B. throw away C. disagree with D. divide into two
17. **supplement:** A. to make additions to B. restore to good condition C. plead in protest D. ally with
18. **tangible:** A. lasting a short time B. justifiable C. that can be touched D. sharp
19. **vie:** A. to compete with B. consider C. fuss over D. quarrel
20. **vilify:** A. to abuse B. weaken C. irritate D. humiliate

(Answers on page 62)

THOUGHTS

Stimulating thoughts coming from noble minds have the touch of dynamism that can set man's thought processes in motion. Analysing these words and reflecting on their inner meanings can, more often than not, lead to plausible solutions to major problems in life—social, political or economic. Here's to adding mobility to your mind.

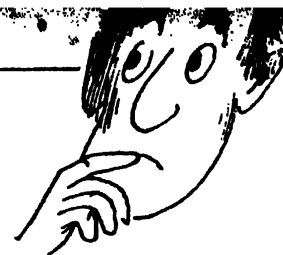
Most of us are basically wrong with DESU (for that matter most of our public sector undertakings) is its chronic inefficiency and for every failure, it has ready excuses and scapegoats.

The Hindustan Times

It would be like water on a duck's back.

Khushwant Singh in

With Malice Towards One And All, The Hindustan Times



If the race of modernisation sets wrong priorities, we may ultimately end up in a state of medievalism instead of the 21st century.

M.M. Buch, *Indian Express*

Protocol gestures as a token of respect are valuable when political relations are as inhospitable as they are now.

[On Reagan staying away for the third time from the funeral of a Soviet head of state] *The German Tribune*

It is an achievement... that India still lives under a Constitution and a rule of justice which is truly liberal and value-based.

M.J. Akbar, *Sunday*

There can be no retirement age in politics or in fine arts. It is for the public to decide when a politician or singer or actor will have to quit.

K.R. Sundar Rajan, *Sunday Observer*

Domestic cooking accounts for more than 50% of the country's total energy consumption. And yet, our energy planners recognise only agriculture, industry and transport as the bulk consumers of energy, ignoring domestic cooking.

Business India

Words are extremely malleable weapons; they are gelignite, they can be used for mining and undermining; they can be stored in the chambers of memory and detonated at precisely the moment required. They mean what you want them to mean.

M.J. Akbar, *Sunday*

If there is one thing that it (Union Budget 1985-86) does not lack, it is courage.

Ashok Lahri on Central Budget, *Sunday*

QUOTABLE QUOTES

It (marriage) is like a cage; one sees the birds outside desperate to get in, and those inside equally desperate to get out.

Michel De Montaigne

Ours is a world where people don't know what they want and are willing to go through hell to get it.

Don Marquis

We know no spectacle so ridiculous as the British public in one of its periodical fits of morality.

Thomas Babington Macaulay

The Lord prefers common-looking people. That is the reason he makes so many of them.

Abraham Lincoln

He uses statistics as a drunken man uses lamp-posts—for support rather than illumination.

Andrew Lang

The life so short, the craft so long to learn.

Hippocrates

What's a man's first duty? The answer's brief: To be himself.

Henrik Ibsen

Let them hate so long as they fear.

Lucius Accius

If I had been present at the creation, I would have given some useful hints for the better arrangement of the universe.

Alfonso The Wise, King of Castile

Feeling a tremendous rakehell, and not liking myself much for it, and feeling rather a good chap for not liking myself much for it and not liking myself at all for feeling rather a good chap.

Kingsley Amis

The eternal *not ourselves* that makes for righteousness.

Matthew Arnold

Pessimism, when you get used to it, is just as agreeable as optimism.

Julien Benda

Superstition is the religion of feeble minds.

Edmund Burke

I slept and dreamed that life was beauty; I woke and found that life was duty.

Ellen Sturgis Hooper

FOCUS

ANTI-RESERVATION STIR

THE BOMB TICKS AWAY

BY AJAY VERMA



Burning with fury: The masses have finally given vent to their fury against reservations. Gujarat and MP witnessed widespread riots.

The simmering fury against the government's reservation policy is gradually coming to the fore in several pockets of the country. The problem has sparked off incidents of violence in Gujarat towns and led to trouble in MP. Almost everywhere the harsh feeling against reservations in jobs and educational institutions is surfacing in one form or the other. And the policy-makers who were taking matters lying down, have been forced to face the hard realities of this acute problem.

Caste, since the later stages of the Vedic Age, has compartmentalised Indian society and has been the cause of many an evil which befell it in the times thereafter. Caste was also an instrument in the hands of the Brahmins to consolidate their hold over the various facets of social life and to perpetuate their dominance. Caste system was in fact a form of legitimised slavery. Though rebellion against discrimination did surface now and then, it never gained momentum because of the internal divisions and the travails of continued subjugation to foreign rulers. The fear of reprisals and ostracisation by the all-powerful high-castes also dissuaded the dissatisfied lot from protesting.

Furthermore, the Hindu philosophy of *karma* made people accept fate as the result of their past deeds. Some change for the good was, nevertheless, initiated in the 19th century by reformers like Raja

Ram Mohan Roy, Swami Dayanand and Swami Vivekananda. Besides the 'low-castes', millions of Adivasis and tribals were also confined to a life of depravity and utter backwardness due to the exploitation of the *zamindars* and money-lenders. Forests, their main source of livelihood, were increasingly brought under state control, especially during the British rule, and they had to turn to the *zamindars* and the money-lenders to survive. Once caught in the web of these *Shylocks*, they ended up as bonded labourers, thus mortgaging the destinies of future generations.

These 'low-castes' and backward classes found their champion in Mahatma Gandhi, who made the elimination of caste-system and the upliftment of the weaker sections of the society, one of the main planks of the freedom struggle and tirelessly strove towards this goal. Commitment to the Gandhian ideology weighed on the minds of the Constitution-framers when they adopted Article 46 of the Constitution, which provides:

"The State shall promote with special care the educational and economic interests of the weaker sections of the people, and in particular, of the Scheduled Castes and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation."

Thus, the Constitution enjoins upon the State a duty to promote and secure economic and educational interests of the weaker sections of the society, comprising particularly of the scheduled castes, scheduled tribes and other backward classes.

To help the State achieve this noble objective, Article 16(4) empowers the State to make provisions:

"for the reservation of appointments or posts in favour of any backward class of citizens which, in the opinion of the State, is not adequately represented in the services under the State."

Furthermore, the hands of the State were also strengthened by the enactment of Article 15(4) through the Constitution (First Amendment) Act, 1951 which provides:

"Nothing in this article or in clause (2) of article 29 shall prevent the State from making any special provision for

the advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes and the Scheduled Tribes."

With this constitutional mandate, the Central and state governments have been reserving seats in educational institutions and posts in public services for the scheduled castes, scheduled tribes and other backward classes. On its part, nevertheless, the Supreme Court has, through a series of judicial pronouncements, evolved a ceiling of 49% on such reservations.

Reservations, no doubt, have helped the weaker sections in different parts of the country find their feet and compete with their compatriots without caste or social bearings acting as an impediment. These men and women have proved their mettle in diverse fields like the judiciary, legislature, bureaucracy, government, education and so on. They have shown that given a chance, they are second to none. But one question still troubles the right mind. Have we not institutionalised reservations and granted them perpetual existence? When the Constitution was adopted, reservations were to cease after a period of 10 years (Article 334). But this period was extended thrice, 10 years each time, in 1960, 1969 and 1980. This is but a clear instance of prolonging a problem rather than finding a solution.

The aim of the reservation policy was to ensure that caste or social position of a person did not prove to be a liability, and equality of opportunity was afforded to all. But, to continue it for the benefit of one generation after another would be contrary to the avowed intention of the Constitution-framers. Justice Krishna Iyer observed in *N.M. Thomas vs State of Kerala*:

"The success of State action under Article 16(4) consists in speed with which result-oriented reservation withers away as no longer a need, not in the everwidening and everlasting operation of an exception (Article 16(4)) as if it were a super-fundamental right to continue backward for all time. To lend immortality to the reservation policy is to defeat its *raison d'être*."

The absurdity of the whole situation can be understood by the following illustration. A person belonging to a scheduled caste was selected as an officer in the Ministry of Finance, in 1954, from the reserved quota. In 1968 his son got into the Delhi Judicial Service, also because he was a scheduled caste. Still further, in 1984 his grandson was admitted to a renowned medical college, though he had secured comparatively low marks, because he was being selected from the reserved quota. In all propriety the benefit should have been

US MINORITY POLICY

In any country, be it a democracy or a communistic state, if there is a minority which has previously been deprived, the question of ameliorative action for the upliftment of the group arises at some stage. Post-independent India had to face the problems of scheduled castes and tribes, who had faced centuries of deprivation. The most advanced democracy in the world, the US too, had to face a similar problem in the middle of the 20th century. The government's answer to the problem in both cases was somewhat similar, although the US did not set explicit 'quotas' in education and employment for the minority concerned.

The blacks in America had emerged from slavery after the civil war in the last century, and the 13th, 14th and 15th Amendments to the Constitution had been passed to ensure their liberty, make them citizens of the US and give them the right to vote. But they were systematically deprived of their citizenship rights through the last three decades of the 19th century by various

exhausted in 1954, but the law as it is, extended it to two more generations and may well go further.

It would be suicidal in the long run for any government to proceed on the basis that once a class is considered backward, it remains so for ever. Having been treated preferentially in the formative years, if a class reaches the "take-off" stage of development, it is beneficial for it to face competition, as that would help in its progress. Reservation of seats and posts cannot and should not be made a vested interest. Furthermore, there are some areas like Engineering, Medicine and specialised technologies like Space Research and Oceanography to which extension of reserved quota has been self-defeating. If the qualification requirements are so rigorously observed to select the best from among the 'advanced classes', relaxation for any class would compromise merit and efficiency. The arbitrary increase in the reservations, as was done by two state governments recently, in both educational institutions and public services, will lead to frustration among those who seek to qualify on the basis of merit but, through such measures, see their opportunities constantly shrinking. If selection on merit is the criterion applicable to the 'advanced classes', choice should also be made to select the best from among the backward classes and weaker sections.

Help and encouragement for

state governments of the US. They had to fight their way up again in the 20th century and it was only in the 1960s that the US Government felt that they had a responsibility towards them and had to take direct action to ensure their upliftment. The government took positive action through various affirmative action programmes which were embedded in the Civil Rights Acts and were enforced through Executive Orders. For instance, Executive Order No. 11246 provided that firms holding federal contracts or sub-contracts are to provide equal employment opportunity to the minorities in living, upgrading, demotion, transfer, etc. Revised Order No. 4 of 1970 stated that these firms had to develop specific action plans which would indicate goals to increase, within a certain time-frame the hiring, and employment of minorities where they were underutilised. Non-adherence to the order could result in partial or total cancellation, termination or suspension of the contract.

In 1972, the Department of Health, Education and Welfare (HEW), followed its own set of affirmative action guidelines for university pro-

advancement 'en class' should only be upto a certain stage after which there should be 'survival of the fittest'. The State would in no case be shirking its social responsibility as it would have provided the requisite base. For education the cut-off point can be the secondary school level stage. Only that student who utilises the opportunity given to him right at the initial stage, can make it to the top later on; those who flounder at that stage fail to justify the inducements given to them and make a mockery of the reservation policy. The large numbers of drop-outs, from among these 'protected classes', in the medical and engineering colleges and other specialist institutions testify to this fact. As for the public services, all promotions should be solely made on the basis of merit. Jobs upto reasonable grade may be reserved but not promotions. If two persons are holding the posts of deputy managers in a government undertaking—one a Rajput and the other belonging to the scheduled tribe—it is only their performances which should count when the vacancy for the post of manager arises. Accent on performance and efficiency would, to an extent, avoid dissatisfaction and jealousy in the ranks and help maintain decent standards of working.

One message quite effectively brought home by the anti-reservation stir over the years, is that the socio-moral duty of endeavouring for the upliftment and

grammes. It indicated that efforts should be made to recruit, employ and promote "members of groups formerly excluded." Goals were, however, not to be confused with quotas. It was also clarified that unqualified applicants should not be hired in preference to qualified candidates.

Although these programmes had the immediate result of getting more blacks into colleges, firms, etc., they were soon challenged by the whites who called it "reverse discrimination" to prefer a black candidate to a white one, all things being equal, since the present generation did not discriminate against the blacks. The present generation, they said, should not be made to pay for the sins of their forefathers. A number of cases like the De Funis and Bakke cases, were brought to the Supreme Court, which ruled that while quotas were unacceptable, the race of a candidate may be considered in any university's admission policy. However, with the advent of the Reagan Administration, emphasis on affirmative action was laid off and today even some Republican blacks feel that, in the long run, affirmative action is detrimental to their interests. S.B.

advancement of the backward classes should not be used to draw political capital. It may provide short-term gains, but ultimately it is bound to boomerang. As Justice Krishna Iyer noted:

"...to politicise this provision (Article 16(4)) for communal and Party ends is to subvert the solemn undertaking of Article 16(1). To casteify 'reservation' even beyond the dismal groups of backward—most people, euphemistically described as SC and ST—is to run a grave constitutional risk."

Justice Iyer was specifically referring to the ploy of the politicians of increasing the reserved seats by bifurcating these castes and tribes into backward and backward-most, especially before the election, with an eye on votes.

The Gujarat and Madhya Pradesh anti-reservation agitations recently, have confirmed that the reservation time-bomb is ticking away. Conflagration can only be avoided if the 'advanced classes' display restraint and understanding and the backward classes and weaker sections, with the benefit of 35 years of governmental encouragement and support behind them, discard these crutches and try and compete as equals. Political parties on their part should forget about potential vote-banks and concentrate more on keeping this country integrated and not add to the already long list of pending problems. ■

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Are reservations a necessity or an evil?

Minorities exist in almost every country; it is upto the government of the country concerned to frame a definite policy towards them. In a democracy, the issue becomes even more problematic because in a democracy the government is of the people, by the people and for the people. Since the people comprise the majority and minorities, and minorities may sometimes face deprivations at the hands of the majority, it becomes necessary for the government to take direct action to safeguard and even promote their interests. After independence, the Indian Government decided to take ameliorative action to promote the interests of its backward castes and tribes. After almost a few decades of reservations in areas like education, employment, etc., there is a slowly emerging outcry against reservations. There are, however, arguments both in favour of and against it.

For

■ The scheduled castes in India were placed in an inferior position in society for centuries. The so-called higher castes considered it a privilege to treat the scheduled castes with utmost scorn. It is, therefore, the duty of the present upper classes to make amends for the sins of their forefathers.

■ Even today, in some parts of the country, the scheduled castes are treated as "untouchables" by other castes and atrocities are committed against them. Having been underprivileged for centuries, the scheduled castes do not have the social power or prestige to fight back. Under such circumstances, the government should try to protect them and safeguard their interests through affirmative action.

■ The weaker sections of society are also economically weaker. Because of their former position in society, they had never been able to build an economic base for themselves. It is necessary for the government to give them a handicap in the fields of education and employment so that they can catch up with the more privileged sections of society.

■ As a result of centuries of deprivation, the backward classes are not able to cope with the modern world, psychologically, without some form of ameliorative action on the part of the government. Hence it is essential to give them a sense of confidence which they have never been able to build up. Unless they do well in life, which they can rarely hope to do without the help of reservations, they will not be able to develop confidence, and the next generation, too, will be mentally unfit to cope with the problems of daily life.

■ Reservations help the weaker sections of society to learn more about their traditional crafts through vocational training. It also gives them the opportunity to learn about the latest technology in their respective fields.

■ The country, at large, can also benefit if outstanding men from the backward classes are given the opportunity to do well. The fact that the potential exists among them can be gauged by the major role played by Dr Ambedkar in framing the Indian Constitution. This potential, however, has to be developed and it can be done through reservations.

Against

■ Almost four decades have passed since independence, and the handicap given to scheduled castes is sufficient enough. Almost two generations have benefited from reservations and they should, by now, have attained better position in society.

■ For the most part, the richer and more privileged sections of the backward classes benefit by reservations. They have the power and influence to fully enjoy the benefits of reservations, to the exclusion of others in their group who are stifled by poverty. For instance, the children of a person like Jagjivan Ram are doing better and better while others who are not so rich or influential still face atrocities and deprivations in their respective villages. In such situations, the government policy becomes useless.

■ The government policy aims at fixing reserved quotas for jobs. Seats in educational institutions are also reserved. These quotas have been growing in number and, today, it is even more than the former privileged classes in society. In some states, reservations go up to 50%, which makes the backward classes the really privileged class.

■ The backward classes are also enjoying better financial benefits. In a democracy, this amounts to reverse discrimination, whereby the upper classes suffer for the "sins" of their forefathers. In the US, affirmative action, which amounts to something like the quota system in India, was highly criticised, and reverse discrimination cases were taken to the US Supreme Court.

■ Reservations make the backward classes lazy. Since everything is offered to them on a platter, the incentive to work for their livelihood is lost.

■ Meritorious students of other classes have opportunities snatched from them, while people from backward classes, with less merit, get the opportunity to reach the highest economic and administrative status. As a result, we sometimes get sub-standard doctors, administrative officers, educationists, etc., whereas the more meritorious students go jobless.

■ Since merit is not the criteria in education and employment, there is an increase in corruption and inefficiency. Jobs being few and merit not being the criterion, people use any means, right or wrong, to grab jobs. ■

DISABILITY AT THE HELM-1

BY M.S. VENKATARAMANI

The Tamil Nadu controversy, relating to the health of the chief minister and the political confusion that it created, brings to the fore the issue of how our polity should deal in future with a situation of physical and or mental incapacity of a chief minister, a prime minister, or a president. It will be unwise to push the matter under the rug. We must now begin to give thought to the formulation of measures so that if ever a problem of disability at the top occurs, established procedures will be available to deal with the situation in an orderly fashion.

The American people have confronted the problem of 'presidential disability' on three occasions. But, till recently, their legislators did not succeed in putting together a measure that could command broad acceptance. Presidents were understandably not too enthusiastic to promote such a legislation. President Dwight J. Eisenhower, however, possessed the necessary integrity to face the issue. Having suffered partial incapacitation in two of his three bouts of illness, in successive years, he concluded that the problem of disability could only be met through a constitutional amendment. Since the amending process would take considerable time, he set forth specific instructions on the procedure to be followed in the event of his becoming incapacitated during the remaining period of his tenure.

Public Concern

Public and Congressional concern over presidential disability increased sharply in the aftermath of the assassination of President John F. Kennedy. Even as they mourned the slain leader, thoughtful Americans reflected on the problems that their country would have confronted if the assassin's bullet had, instead of taking President Kennedy's life, left him incapacitated. Public sentiment resulted in the initiation of the process of constitutional amendment and in 1967 the 25th Amendment to the Constitution of the US was put in place.

The issue of 'disability at the top' bristles with many difficulties. What level of physical and mental incapacity in a chief executive is acceptable and tolerable in our system? Who is to investigate the level of incapacity and to make the determination that an ailing chief executive does or does not possess the physical and mental capacity to perform the duties of his office? Can such a responsibility be solely entrusted to the personal doctors, friends and family members of the sick man?

What is the duration of chief executive disability that the system can safely tolerate through some such device as giving the sick man medical leave for treatment and recuperation? Can a unilateral statement by the patient, at some point during the period of such leave or at the end of it, to the effect that he is quite fit, suffice to restore him to his office? Or, should he have to submit himself to some prescribed investigation process and receive a certificate of medical fitness before he can take back the reins?

An elected leader, if he were to be fair to his constituents, should voluntarily step down if his health is poorer than the level that is essential to carry the load of essential work. All too often however, the ailing great man, like other lesser mortals, cannot bring himself to accept the reality. The problem gets aggravated if the stricken leader is kept incommunicado by loyal members of his personal staff and his immediate family who generally have a vested interest in putting out optimistic reports concerning his health. His personal doctors can become partners in that, exercise.

No Qualms

That was exactly what Dr Moran did when PM Winston Churchill suffered a heart attack in December 1941, while on a visit to Washington, shortly after Pearl Harbour. Churchill had no doubt in his mind that, stricken or not, no one else could occupy the number one position in the British Government and he did not want the British people to be told anything about the heart attack! Dr Moran had no qualms in agreeing with his patient.

During the latter part of his second term as Prime Minister, Churchill was reduced to a mere ghost of his former self. As Dr Moran revealed several years later, Churchill was the victim of a variety of maladies. While recording in his diary in 1954 that the Prime Minister was in a state of advanced "decrepitude", and listing the several serious ailments, operations and strokes that Churchill had had since his heart attack, Dr Moran patted himself on the back for having kept it all, from the public, and for that matter the political world?"

Franklin Roosevelt, too, was rather a sick man as he neared the end of his third term as President of the US. But, as his 'handler' and cronies applauded, he sought to show himself to his people as the same leader of buoyant vigour and tireless energy as they had known him for so many years. A young heart specialist who had

been summoned by Roosevelt's personal physician to examine the President, made a diagnosis of "hypertension, hypertensive heart disease, cardiac failure (left ventricular) and acute bronchitis". Despite this finding, Roosevelt's personal doctor went along with the rest of the President's entourage in pushing him on.

The American people had no inkling that the man whom they had elected for a fourth term was in very poor health. Members of his Cabinet talked anxiously only among themselves about the President's haggard appearance and trembling hands. The man found himself being hauled to a summit conference in distant Yalta with Stalin and Churchill, instead of to his cottage in Georgia for an extended period of rest and medical care. A few weeks later he died "in harness".

The onset of the cold war and the political controversy in the US over the agreements reached at Yalta brought into the open the issue whether President Roosevelt's poor health had seriously impaired his effectiveness in his discussions with Joseph Stalin. The controversy brought back to the consciousness of the American people two earlier episodes of presidential disability. Shot by an assassin in 1881, President James Garfield remained incapacitated for some months before his death. Washington remained rudderless and confused during that period. The second and much more bizarre incident occurred in 1919 when President Woodrow Wilson was laid low by a paralytic stroke.

Total Seclusion

When Wilson was stricken, no word of his real condition was conveyed to the American public, to Congress, or even to members of his Cabinet by the President's wife and by his personal physician. Under the watchful eyes of his wife the President remained in total seclusion in the White House for weeks that extended into months. Even after the passage of three months Secretary of State Robert Lansing had not been able to see the patient. He told his friends that it was his belief that the President was "much sicker than the public is led to believe". As the senior member of the Cabinet, Lansing had called for informal meetings so that he and his colleagues could discuss matters and carry on the business of government. When news of Lansing's action reached Mr. Wilson, a letter went forth from the White House requesting the immediate resignation of the Secretary of State.

During the many long months when the President remained in seclusion, with his strength and faculties seriously impaired, the US came to be virtually governed in his name by an "extra-constitutional authority"—Mrs Wilson.

(To be concluded)

UTILITY OF MAPS-1

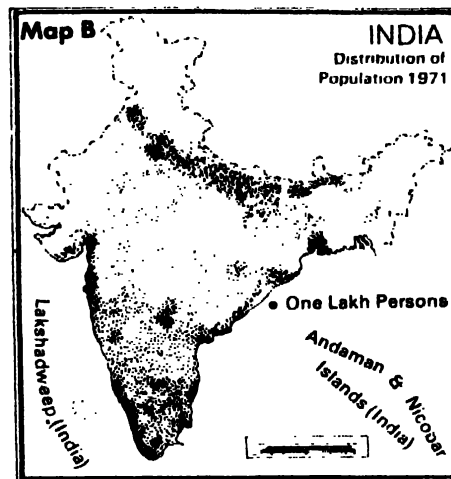
BY N K HANS

Are you appearing in an interview, in the Civil Services Prelims, Bank PO exam or in any other competition? Can you afford to go blank when map interpretation questions are asked or can you afford to ignore questions on agricultural distribution, mineral belts, industrial concentration or places of historical or political importance? Remember, losing one point (or mark) may mean losing your chance in the competition. Do not ignore such areas. A little more effort on your part and you score over others. This series provides a background on map reading and map tracing, and practical interpretation of geographical, economic, political and historical maps. The last two parts of the series are specially meant for those appearing in the Civil Services Mains with History as optional and will also help students score well in questions based on maps.

Hitler used to say, "Give me a detailed map of a country and I shall conquer it." Maps have guided the strategies of wars. History of the world shows that wars were won by those nations who committed fewer blunders in map interpretation.

A map is a representation of a small or large area of the earth on paper. It may be regarded as a conventional picture of the earth's surface, as seen from above, to which lettering is added for identification. A map always has some proportion to the actual size of the area on the ground. This proportion is known as the scale of the map and is always given on it.

Maps are classified either on the basis of their scales or on the basis of their content and purpose for which they are required. Based on scales, maps have



been divided into four types:

Cadastral maps: The term *cadastral* is derived from the French word *cadestre* meaning register of territorial property. They are maps based on the largest scales and are sometimes known as 'plans'. These maps are useful for identification of boundaries of property, in legal documents, and for detailed issues such as local administration, taxation and the management of estates.

Topographical maps: The topographical maps of India are prepared by the department of Survey of India. They are large scale maps but their scale is smaller than that of the cadastral maps. Mainly, the scale is of one inch, half inch and quarter inch respectively, to a mile. Such type of maps are useful for travellers, motorists, soldiers for war operations and geographers for studying the regional geography of an area in detail.

Wall maps: Wall maps are usually drawn boldly so that they may be used in the class room. Their scale is smaller than that of topographical maps but larger than that of atlas maps.

Chorographical or atlas maps: Drawn on a very small scale they give a more or less generalised picture regarding the physical, climatic and economic conditions of different regions of earth. The atlas maps are drawn on a very small scale.

Based on the content and the purpose for which they are required maps are divided into:

Physical maps: Supply information regarding natural features.

Astronomical maps: Show heavenly features.

Orographical or relief maps: Depict relief and drainage of the area, i.e., mountains, rivers, etc.

Bathymetric maps: Indicate the depth of

oceans.

Bathorographical maps: Deal with the combination of the above two features.

Geological maps: Show rocks, their types and structure.

Climatic maps: Indicate sum total of weather conditions spread over a longer period. The data is generally the average for a considerable number of years or months as the case may be. A climatic map generally shows only one condition, be it temperature, rainfall or any other.

Weather maps: Deal with conditions observed at a given time. In India these are prepared twice a day by the Meteorological Department of India, Pune.

Vegetation maps: Show distribution of natural vegetation in the area.

Soil maps: Show various types of soils covering any given area.

Cultural maps: Provide information about manmade features.

Ethnographic maps: Show distribution of different races.

Political maps: Show political boundaries between the political units, roads, railways, towns and administrative units.

Military maps: Show strategic points, routes, battle plans, etc.

Historical maps: Deal with past events.

Social maps: Deal with social organisations like tribes and races, their religion, language, etc.

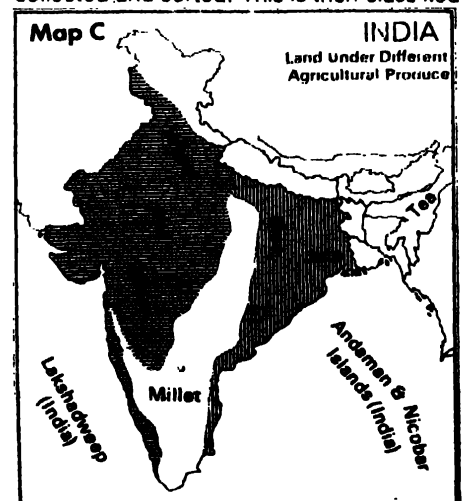
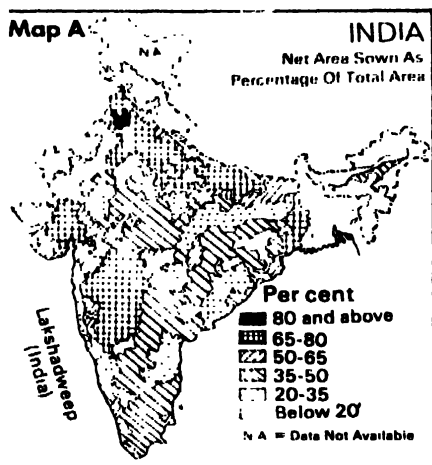
Population maps: Indicate the density of population in the area shown.

Economic and statistical maps: Show centres of agricultural yield quantities produced in different years, trends and direction of trade, export, import, etc.

Communication maps: Show roads, railways, sea or air routes.

Map Reading

As a map encompasses a great deal of information in the form of symbols, letters, etc., we must learn these symbols, letters and then study the map systematically. The interpretation has to be from the map alone. The features shown in the map are collected and sorted. This is then classified



Unmetalled Road	Date palm
Metalled Road	Deciduous tree
Road through a cutting	Well
Double-line railway (broad gauge)	Spring
Single line railway	Pipe line
Metre gauge railway (under construction)	Tank with embankment
Metre gauge railway	Canal with lock
Tramway or mineral line	Marsh
Road over railway	Village
Railway over road	Scattered village
Railway over railway	Deserted village
Tunnel	Church
Aqueduct	Temple
Telegraph line	Mosque
Country boundary (surveyed)	Fort (surveyed)
Country boundary (unsurveyed)	Fort (conventional)
State boundary (surveyed)	Camping ground
State boundary (unsurveyed)	PO Post Office
District boundary	TO Telegraph office
Coniferous trees	RH Rest House
	DB Dak Bungalow
	BM300 Bench Mark

in illustrations of some aspect of physical geography, of human geography or of both. First of all, the marginal information (that is, information of a general character always shown on the margins of all maps) must be carefully studied. The information includes: (1) Name of the sheet, given at the top or foot of the map (2) Scale shown at the foot of the map (3) North and magnetic variation (4) Altitudes given in feet (generally) (5) Heights depicted by layer-tints or contours (6) Index or legend (or symbols) giving an abstract of important conventional signs (7) Reference numbers, shown on the top right hand corner (8) Longitudinal and latitudinal extent of the map (9) Area covered by the map in square miles (10) Date of publication and surveying.

Different symbols are used for various

features and distinct letters for different purposes. These symbols, known as conventional signs, are shown on what is called a characteristic sheet (available from the Map Record and Issue Office, Survey Of India, Dehra Dun). A good symbol is one which can be recognised without the help of a legend. To read a map legibly, we must acquaint ourselves with the symbols generally used. The symbols of a map (see Box I) may be divided into four groups:

Relief features (Hypsography)—by various shades of brown

Relief features (Hydrography)—by blue

Vegetation features—by various shades of green

Manmade features (cultural)—generally shown by red and black

Milestones are marked by a numeral indicating the distance; roads are exaggerated in scale to make them prominent. Bridle paths and foot paths are shown by broken lines in red. Bench mark abbreviated as BM is a fixed point that serves as a datum line from which other measurements can be checked or made. Railways are depicted in black by double lines with short ticks in between; for a double line the alternate spaces are solid black. Hachures taper away from the railway line in the case of embankments, while in the case of cuttings the hachures taper towards the railway. Rivers are shown by a double line with water lining and are tinted blue on coloured maps. Rivers less than 15 feet in width are shown by a single line. Canals are shown in double parallel lines, in blue. Pasture ground is shown by minute black ticks arranged in series. Orchards are shown by small tree signs symmetrically arranged. Woods are shown by trees and tinted green on coloured maps. Parks are shown by stippling of black dots. Quarries are shown by a dark line from which emerge short lines. Buildings are marked solid black or red.

In order to study physical geography, human geography and vegetation the area is to be divided into two or three zones based on relief

Each zone is studied in terms of an analysis of relief, i.e., slopes, heights, waterfalls, watersheds, high ground, low lying valleys, etc; river work—stages of development; glacial phenomena—erosion and deposition; coastal features and type of rock and soil, if indicated. Then we study natural vegetation. In human geography, we then analyse the human response to physical environment, we observe and analyse agricultural and land utilisation; various means of communications—the class, type and direction; town sites; industries; recreation; historically important places, events, routes and rural settlements. Thus we read

Calm	Moderate thunder
Light air	Severe thunder
Light breeze	Gale
Moderate breeze	Shower
Fresh breeze	Rain shower
Strong breeze	Drizzle
Moderate gale	Snow
Fresh gale	Shower of snow
Strong gale	Sky clear
Whole gale	1/4 sky overcast
Storm	1/2 sky overcast
Hurricane	3/4 sky overcast
Snow storm	Absolutely cloudy sky
Small hail	
Hail	
Distant lightning	
Light thunder	

Capital letters indicate intensity; repetition of letters indicate continuity and suffix 0 indicates slight

R = heavy

r₀ = slight rain

rr = continuous moderate rain

rr₀ = continuous slight rain

b = blue sky (not more than 1/4 covered)

be = partly cloudy sky (1/2 covered)

c = generally cloudy (3/4 covered)

O = overcast sky

d = drizzle

f = fog

h = hail

kg = line squall

l = lightning

m = mist

r = rain

p = passing showers

Q = squall

rs = sleet (rain and snow)

s = snow

t = thunder

v = normal visibility

w = dew

x = hoar frost

y = dry air (when the humidity is less than 60%)

z = dust haze (the muddy atmosphere of dry weather)

Temperature is shown in °F. average velocity in miles/hour by figures in small circles, wind direction by arrows flying with the wind.

(Continued on page 56)

PUNJAB

PEACE IN SIGHT ?

The Centre's gamble has failed to pay off once again. Far from creating a congenial atmosphere for the conduction of talks between the Centre and the Sikh leadership, the release of the Akali leaders has succeeded in undoing, to a large extent, what the government had done by way of normalising conditions in Punjab, over the past few months. For, contrary to expectations that the Akali leaders would adopt a more conciliatory attitude in response to the Centre's placatory moves, the Sikh leadership is still intent on moving on the path of confrontation.

Ever since his release Harchand Singh Longowal has been crusading for the Sikh cause—reiterating the very demands which had earlier resulted in a deadlock between the Centre and the Akalis. Featuring prominently on the list of demands are the acceptance of the Anandpur Sahib resolution and an inquiry into the November riots. The Akalis have also adopted their threatening tactics again and issued an ultimatum to the government to accept their demands or else they would revive their agitation.

Meanwhile, the Centre, undeterred by the aggressive stance of the Akalis, went ahead with another fresh bid to solve the Punjab tangle. For, as the Home Minister S B Chavan explained, the government was prepared to give this agitating faction some time to make up its mind. The earlier bids included the release of the arrested Akali leaders and the appointment of Arjun Singh as the new Governor of the state. This time the Centre demonstrated its flexibility even on such issues as the removal of army when it withdrew army personnel on civil duty in Amritsar, Ferozepur and Gurdaspur districts and replaced them with additional security forces. Already ten more battalions of the CRPF and BSF have been inducted into the state with the result that Punjab, at the moment, has the highest ever concentration of security forces. The government, having casted off its earlier inhibition, is not averse to holding an inquiry into the November riots if it manages to create a congenial atmosphere.

On Mar 23, PM Rajiv Gandhi, during his visit to Hussainiwala, near Ferozepur, expressed his government's willingness to keep its promises. He also disclosed his own keenness to restore to Punjab its earlier pace of development by constructing a Rs 700 crore multipurpose Thein dam project and setting up an integral coach factory in the state.

But, evidently, the extremist elements did not appreciate such gestures which could ultimately lead to an amicable solution to the Punjab problem. Within 24 hours of the PM's departure they struck a lethal blow which shattered the existing calm. The Chandigarh BJP General Secretary, Krishan Lal Manchanda, was gunned down by unidentified assailants in his premises while his 11-year-old son was seriously injured. To avert further ramifications, the authorities immediately clamped prohibitory orders in the Union territory and also ordered the closure of all educational institutions. Owing to these measures the bandh organised by the BJP, on Mar 26, in Punjab and Haryana, to protest against this brutal killing also passed off peacefully.

The Centre, on its part, did not rise to the bait and is at the moment engaged in preparing a package of proposals for solving the Punjab issue. On Apr 3 a high ranking Cabinet Committee comprising S.B. Chavan and the Union Education Minister, K C. Pant, toured the state to record the views and grievances of the people which will be taken into consideration while finalising the peace package. The objective of this package—which will include an inquiry into the riots, proposals for solving the territorial issue, the river-water issue and the Anandpur Sahib resolution—is to strengthen the political process in the state. The AICC(I) has also launched a mass drive to explain the various aspects of the Punjab issue to the people of the state so that they may view the situation in the correct perspective. The present term of the Punjab Assembly will end in June while the President's rule will expire in October. The Centre, therefore, is keen to conduct both Lok Sabha and Assembly elections in the state between June and October. At this juncture the Akalis should realise that actions like the boycotting of consultations called by Chavan and Pant, while in Chandigarh, will not help them in any way; neither will the rejection of the olive branches, extended by the government time and again. In its latest attempt to pacify the Akalis it has already acceded to the demands for a probe into the November riots and the lifting of the ban on the All India Sikh Students

Federation (AISSF). A judicial inquiry into the riots by a sitting judge of the Supreme Court has been ordered. These gestures have been hailed by the Akalis. But this does not mean that they have solved the Punjab imbroglio either. The Akalis, apparently under the impression that threats will achieve for them what negotiations may not, have now issued a fresh threat to resume their agitation in June if their other demands are not fulfilled. As things stand now, only negotiations will prove beneficial to both sides.

ANTI-RESERVATION STIR

ASSUMING 'CLASSIC PROPORTIONS

The caste-class cauldron finally boiled over in Gujarat and, to a lesser extent, in Madhya Pradesh. It all began on Mar 18 when the Gujarat bandh organised by the Akhil Gujarat Navrachana Samiti, as part of a month-old anti-reservation stir, took a violent turn. The Rane Commission report, finally made public after persistent demands, revealed its recommendation that reservations should be linked with the economic condition and the occupation of the beneficiary. The income limit suggested by the commission for granting concessions was Rs 10,000 per annum. What perhaps incensed the agitators and triggered off the recent spurt of violence was the fact that the Gujarat government had conveniently overlooked the latter half of the commission's recommendation, i.e., the vital clause which linked reservation quota to the degree of backwardness (including economic criteria).

Protesting students in Gujarat went about expressing their displeasure in the most violent ways. They freely indulged in incidents of arson, stone-throwing, brick batting and also went about setting shops, houses and buildings ablaze. The situation soon went out of control compelling the authorities to impose shoot-at-sight orders. Large contingents of army and special reserve police were deployed and the entire walled city of Ahmedabad was placed under indefinite curfew on Mar 19. Apart from the massive loss of property the death toll also kept rising steadily, with each passing day, and according to official estimates 13 people lost their lives in the orgy of mob fury. On Mar 20 the Union Home Minister, S B. Chavan, air dashed to the not affected city of Ahmedabad to make an on the spot assessment of the situation.

But, even the presence of the army did not deter anti-social elements from attacking police pickets and patrolling parties. They even attacked the police with fire balls. Soon Baroda, initially the only city which had remained relatively unaffected, also came under the grip of widespread violence. And then, just when the authorities thought they had succeeded in curbing violence and had even relaxed the curfew imposed in several areas in the state they were faced by a fresh bout of incidents of stabbing, on Mar 22, which forced them to reimpose curfew all over again.

Such was the gravity of the situation that on Mar 23 the PM visited Ahmedabad and even sanctioned Rs 5 lakhs from the PM's relief fund for those affected during the riots.

Following the PM's visit, violence abated but tension escalated again on Mar 27, following the Saurashtra bandh. The stir took a new turn when 600 junior doctors of the government civil hospital and dental hospital went on an indefinite strike to protest against the arrest of some student leaders under the National Security Act (NSA).

Keeping the conditions in view exams in the colleges and universities of the two states have been postponed indefinitely. Unless the Centre intervenes to control the situation, the anti-reservation stir may take an ugly turn. Violence erupted again on Apr 2, and to make matters worse, the backward castes—beneficiaries of the reservation policy—have formed a new counter agitation body "Anamat Andolan Pratikar Manch" and have warned the anti-reservationists of launching a counter-agitation if they do not call off their stir. The government of Gujarat, after hurried consultations, has announced its decision to defer the implementation of the policy and appoint a commission to review the policy before implementing it. The MP government has gone a step further and decided to shelve the policy. It can only be hoped that these decisions will help to restore peace to the strife torn states and avert any further confrontations between the pro and the anti-reservationists.

For, the anti reservationists in Gujarat have now, to complicate matters further, refused to have any negotiations with the state government until the unconditional release of student leaders detained under NSA. Their other demands include immediate revocation of termination orders against striking junior doctors of the Ahmedabad Civil Hospital and also

the cancellation of reservations of seats made in their place. The state government, on its part, has refused to review the reservation policy till the agitationists call off their stir. In order to woo the sympathy of the pro-reservationist group, the spearheading organisation of the anti-reservationists, the Akhil Gujarat Navrachana Samiti, has now suggested additional scholarships for backward classes. In its latest offensive it has also threatened to launch a no-tax movement if the government decided to hold back grants to schools not conducting exams and has also given a call for boycotting all programmes attended by government officials, ministers and MLAs. In such a situation the chances of the stir subsiding appear to be very scant indeed.

SOVIET DIPLOMATS

DEFECTION AND DEATH

It all started with the mysterious disappearance of a Soviet diplomat on Mar 17. A third secretary in the information department of the Soviet embassy, Igor Guejo had been working in the Delhi-based Soviet Information Centre, for the past six years. On the day of his disappearance he had gone for his routine morning walk in the Lodhi Gardens and only when he failed to return home till evening was a report lodged with the police. And, even as the police was engaged in tracing out the whereabouts of the missing Russian, another Soviet official V. Khitzichenko, a senior engineer in the economic division of the Soviet embassy, was gunned down by two unidentified assailants in broad daylight, on Mar 22.

The incident occurred when Khitzichenko was returning home with his wife after a shopping spree. The two assailants who had been following their chauffeured embassy car on a motorcycle, overtook the car and fired a volley of shots through the rear windscreen, killing Khitzichenko who sustained four bullet injuries. This perfectly planned macabre operation was obviously the handiwork of professionals.

The cold-blooded murder of the Soviet official sent shock waves rippling through the diplomatic community in the capital. Though a US based Ukrainian group, viz., the Ukrainian Reaction Force (URF) claimed responsibility for the killing, as a protest against the presence of Soviet occupation forces in Ukraine, terrorised diplomats in the city raised a clamour for intensified security. The rounding up of numerous Afghans by the Delhi police and their subsequent investigations, however, failed to provide any clue to the whereabouts of the killers.

Meanwhile, the Soviet embassy quickly established a connection between Guejo's disappearance and Khitzichenko's murder and assumed that Guejo had been abducted by associates of the killers. Their fears were converted to shocked disbelief when the missing diplomat surfaced in the United States. Guejo had defected to the US and was granted political asylum. Surprisingly the news of the defection was conveyed to the foreign secretary, Romesh Bhandari, by the Soviet ambassador and only later was it confirmed by the US charge d'affaires in Delhi. Guejo's defection was obviously meticulously planned and executed, for not a word about it got around till after the defection was completed. But what has created a ruffle in the Soviet embassy is the fact that Guejo was not even listed in the diplomatic circles and was a relative non-entity in the embassy's hierarchy.

The possibility of the Khitzichenko killing having been executed to throw the police off Guejo's trail cannot be ruled out at this juncture. Needless to say, these two incidents, following each other in quick succession, have embarrassed both Moscow and New Delhi considerably. For India, of late, seems to have become a happy hunting ground for such international defections and terrorist activities. And what continues to baffle the authorities is why two relatively insignificant diplomats were made the targets of defection and death.

MIZORAM

DEADLOCK YET AGAIN

Certainly no solution to the 18-year-old Mizo insurgency problem is anywhere in sight at the moment. All hopes of a final settlement of the vexed issue are fast receding. Talks between the Centre and the outlawed leader of the Mizo National Front (MNF), Laldenga, have failed to resolve the deadlock over various outstanding issues. And a stalemate has recurred.

As the Centre and the MNF had earlier agreed on the granting of statehood to Mizoram, similar to that of Nagaland, under Art 371 A of the Constitution, several problems have now cropped up, viz., the special status accorded to the Governor under this article. According to Laldenga, this move would virtually place the state under Central rule. Again, no accord can be reached over the interim arrangement, before the Parliament is able to grant statehood to Mizoram and conduct fresh

elections in the state following the dissolution of the Assembly. The erstwhile MNF leader has suggested that in the event of a dissolution of the state Assembly, President's rule should be declared in Mizoram and administration should be carried on by the Lt Governor with the help of a council of advisers, presumably to be headed by Laldenga himself. For, Laldenga feels, only then will the Mizo underground be assured of their safety in the hands of the administration. Intact he even went to the extent of saying that special constitutional provisions were needed to safeguard the interest of the entire Mizo population as they were backward and, hence, could not compete with the others. Not content with the acceptance of statehood for Mizoram the MNF leader is now demanding 'Kashmir-type reservation' for the state in trade and commerce.

Also enlisted among the MNF demands is the dissolution of the autonomous district council for the minority Chakma tribes and, thereby, the withdrawal of the Sixth Schedule to the Constitution, applicable in certain parts of the state. The MNF is strongly opposed to the creation of the autonomous district council for Chakmas in particular, since it is of the view that the Chakmas are not inhabitants of India and therefore this would be highly objectionable, irregular and unconstitutional. As for the schedule the MNF feels it promotes divisiveness as it provides for administration of tribal areas in Mizoram through autonomous district and regional councils.

While the government has given the three-member MNF delegation, headed by Laldenga, which visited the capital recently, a sympathetic hearing, no solution has been forthcoming. Hence the insurgency problem remains unresolved.

ASSAM

CRUMBLING FENCES?

The closed door talks between the Centre and the Assam agitation leaders, held in February this year, has only left both the sides to reconsider their respective stands. The agitation leaders, comprising the All Assam Students Union (AASU) and the All Assam Gana Sangram Parishad (AAGSP), have apparently not retracted from their earlier stands on the immigrants issue and are still being persistent about their demand for the deportation of the immigrants who entered Assam between 1961-71, back to Bangladesh, or their dispersal elsewhere in the country.

Earlier, the agitation leaders had expressed their willingness to consider 1965 as the cut-off year for the detection of immigrants from Bangladesh, provided the Centre agreed to disenfranchise all those illegal immigrants who had entered India between 1965-71, for a period of 20 years. The government, however, is reluctant to extend this period beyond five years.

The Centre is now having second thoughts on its agreement to detect and deport the post '71 immigrants to Bangladesh as the Bangladesh government has refused to recognise their presence and has clearly indicated its intention of stonewalling any attempt to push them back. These immigrants cannot be dispersed to other states either, firstly because their identification may prove to be a consuming problem, and secondly because they will now find it difficult to readjust themselves to new conditions, all over again.

Meanwhile, in the agitating camps, serious rifts have occurred and the once all-powerful AASU has suffered serious erosion at its grassroots. A number of leaders and members have split and formed a new student body—the All Assam Elected Students Representatives Union (AAESRU)—which is also seeking official recognition. This fact, coupled with the widening rift between the AASU and AAGSP could considerably weaken their agitation. But, the Centre has wisely restrained itself from being lax in seeking an early solution to the Assam problem. The Union Home Minister, S.B. Chavan, recently visited Assam to reaffirm the Centre's desire to negotiate with the leaders. The Centre has taken fresh initiative to resume talks but has sought some proposals from the agitating leaders before the talks actually get underway. Meanwhile the pre-poll preparations for the 14 Lok Sabha seats in the state, scheduled for May, are proceeding unhampered.

INDO-SRI LANKA

CAUTIOUS OVERTURES

Foreign secretary Romesh Bhandari's three-day visit to Colombo has considerably brightened the prospects of an early meet between PM Rajiv Gandhi and the Sri Lankan President, Jayewardene, to review bilateral relations between the two countries. On Mar 24 Bhandari left on a solution mission to Sri Lanka as the PM's special envoy and this peace initiative was duly appreciated by President

Jayewardene.

The outcome of Bhandari's visit was that an accord was reached on the urgent necessity for the cessation of violence to create a congenial atmosphere for political dialogue between the two countries. It was also decided upon by both sides that steps should be taken to improve communication and travel facilities and also maintain regular consultation at an official level on bilateral and regional matters between the two countries. The problem of harassment of fishermen, the swelling rate of Tamil refugees in India and the question of stateless persons, were also reviewed during this visit.

Sri Lanka, however, specified that the solution to the island country's ethnic problem should be within the framework of the unity, sovereignty and integrity of the country. And, on his part, Jayewardene is also contemplating a step towards easing the problem which has assumed such alarming proportions, he is considering issuing cease-fire orders to the Sri Lankan forces in the predominantly Tamil north-east. And, as this was the area where the Sri Lankan militant forces inflicted the maximum atrocities on the Tamil population, this announcement comes as a welcome relief for the tortured Tamils at least.

But, shortly after Bhandari's visit, on Mar 31, six Tamils were gunned down by the Sri Lankan troops on the pretext that they were Eelam guerrillas. And then on Apr 10 in a four-hour pitched battle between Tamil militants and the police in Jaffna, 20 militants and four policemen were killed. This offensive by the Tamil militants provoked Jayewardene into lashing out against India once more. Which leaves one to wonder exactly how far one should read into repeated affirmations of goodwill by the two countries.

EXPORT-IMPORT POLICY

BALANCING THE SCALES

The government's new policy package for trade and industry comes as a pleasant surprise. Valid for a period of three years (1985-88) the import-export policy aims at providing a major thrust to exports, improving productivity and also promoting import substitution. To achieve these aims a large number of innovative procedural changes have been incorporated into the policy.

The government has also tried to remove the year-to-year uncertainties by providing a stable environment to trade and industry as this will go a long way in helping the industry to plan production on a longer term perspective. The latest measures have also been implemented by the Centre to support indigenous production.

In the import-export policy as many as 201 items of industrial machinery have been included in the list of capital goods that are allowed for import under the Open General Licence (OGL). This will undoubtedly strengthen the base for export production through upgradation of technology.

Automobiles, leather garments, oil field services, electronics, jute manufactures, cement and cement binders, canning and pen machines, fishing boats, etc., are the major beneficiaries of the liberalised policy of capital goods import. With regard to the indigenous availability exemption of raw material and components have been shifted from the banned prohibited list to the restricted list. From the open general licence (automatic permit) list 157 items have been shifted to the restricted list. Only two items, liquor and animal hides, remain in the banned list.

The automatic exemption has been abolished altogether and a number of items included under the automatic permissible list have been brought under OGL. Consequently there will be no need to obtain certificate of post-shipment and to apply for an import licence which will prove to be particularly beneficial to small-scale industries.

Another important highlight of the introduction of the new import-export policy is the 'back-to-back' scheme. Designed to provide manufacturer-exporters with an effective import credit, the scheme is wider in its scope than the present advance payment scheme and will come into effect from Oct 1, 1985.

In addition to the austerized policy has been adopted for import of computer goods, modular and systems. Those costing Rs 10 lakh (oil) are exempted from payment of duties for their own use, and if the same are sold after obtaining prior clearance of the department of electronics, a concessional rate of 10% will be payable. However, import of computer goods (computer based system) costing less than Rs 10 lakhs will continue to attract equivalent rate of duty. The scope of the computer software import scheme has now also been extended to satellite countries.

The value limit per unit, to cover foreign exchange requirements for balancing equipment and acquiring technical know-how from the US, has been raised from \$5 lakhs to the US dollar equivalent of Rs 100 lakhs. Also, trading houses and export houses will now be allowed to import technical drawings and designs for their supporting manufacturers to the tune of Rs 10 lakhs and Rs 25 lakhs, respectively, against their own REP additional licences. Meanwhile, the concept of eligibility for additional licences based on net realisation of foreign exchange has been extended to the growth rate prescribed for the renewal of export/trading house certificate. Special facilities for import to non-resident Indians and to persons of Indian origin, returning to India for permanent settlement will also continue.

The policy on import of firearms has, however, been tightened. Important changes have also been introduced in the export licensing policy. Exports to Pakistan have been brought on par with other permissible destinations. Also, the export of large number of items which were earlier banned will now be allowed within a limited ceiling. Large powers have been delegated at various levels for import of capital goods, raw materials and components to facilitate quicker decision-making through decentralisation.

In toto then, this new import-export policy will be a further step towards improving the overall economic situation by striking a balance between export promotion and import substitution.

BUDGETS '85-86

LIFTING LEVIES

Seldom does a budget obtain the unanimous approval of all sections of society. This year again both the railway budget and the general budget for 1985-86, incurred the expected criticism from the affected sectors. Criticism of the railway budget, in fact, took the form of a rail roko agitation in West Bengal by various organisations in protest against the rise in passenger and freight fares. The government, however, took immediate stock of the situation and announced a cut in the rail fares hike and also withdrew a few other budgetary levies—apparently to pacify the poor and the agriculturists.

The hike in rail fare was reduced from 12.5% to 10% and is now the same as the increase in freight fare. This will, however, further worsen the state of railway finances since expenditure would now exceed the earnings. It has been estimated that the deficit, at current rates of tariff, will be Rs 403 crores this year.

And, within a week of the announcement of the general budget, the new levy on *bidis* was withdrawn and a seven paise per litre reduction was introduced in the increased prices of high speed diesel and kerosene. Excise exemption on poultry equipment and agricultural implements was also given. To make up for this loss of revenue, a fresh levy on cigarettes has been announced which will yield a total revenue of Rs 95 crores in a year. This levy will be at the rate of one paise per cigarette and will be higher for a pack of 10 cigarettes costing Rs 3 or more, per pack. Cigarette packets of 10 cigarettes priced at less than 60 paise will, however, not be affected.

By withdrawing the new impost on *bidi* the government will incur a loss of Rs 10 crores in a full year. In order to provide relief to peasants the government has decided to exempt agricultural implements—including power-operated implements and poultry farm equipment—from item 68 of the excise tax.

STATE BUDGETS '85-86

MIXED FORTUNES

Following the presentation of the Union budget for 1985-86, several states have also put forward their annual budget proposals. The main measures proposed in the Haryana budget include increase in bus fares, duty on electricity and duties and fees on alcohol and liquor shops. It has been estimated that these measures will fetch an additional revenue of Rs 86.5 crores. They will also help in neutralising the anticipated closing deficit of Rs 114.321 crores for the next financial year, to a large extent. A noteworthy feature of this budget is that there will be a significant increase in the proposed plan size for the next year—likely to be well over Rs 500 crores. A series of additional facilities and concessions for government employees, traders, industrialists and agriculturists have also been announced. The revenue surplus for 1985-86 is thus likely to go up from Rs 47.55 crores to Rs 72.5 crores.

The annual budget for West Bengal came as a welcome surprise. Reduction in tax on cinema tickets, motor cars, milk powder, exemption of power plants from electricity duty were proposed. Entertainment tax

to give a boost to the state film industry. However, a new tax was imposed on Janta formations and a levy on transit traffic through the state was introduced. The budget also proposed a raise in tax on liquor, select hosiery items and inter-state tea trade. But, what is most heartening about the West Bengal budget is that it shows an estimated surplus of Rs 29.92 crores with taxation proposals yielding an additional revenue of Rs 41.34 crores.

In sharp contrast to the West Bengal budget was the Rs 264.20 crores deficit budget of Tamil Nadu. This, despite the imposition of a mammoth Rs 40 crore additional levy on arrack (country liquor). Additional tax was also imposed on certain minerals and motor vehicles. A meagre sales-tax concession on some items amounting to Rs 5 crores was also announced.

Following in the lines of the Tamil Nadu budget came the Rs 133.66 crores deficit interim Madhya Pradesh budget. However, the MP finance minister, sought a vote on account for expenditure of Rs 1,372.99 crores for four months, upto July, on the plea that he could not fully consider the state's policies as the ministry had been recently constituted. It has been estimated that the budget will yield a surplus of Rs 8.74 crores but on account of the opening balance of minus Rs 142.40 crores, the deficit by the year end will be Rs 133.66 crores.

Karnataka, however, presented an interim budget with a record deficit. The final budget will be presented by July end as the state Plan for 1985-86 has not been finalised. The budget showed a phenomenal Rs 341.60 crores deficit. No new tax proposals were announced.

ELECTRONICS POLICY

TOWARDS LIBERALISATION

The government's new package of incentives for the electronics industry obviously aims at giving a boost to the industry by providing the much-desired liberal environment. Over the past few months it is the third move the Centre has made in this direction—the first was in November last, in the form of the computer policy, followed by certain fiscal incentives in the Union budget.

The new electronics policy provides for liberalised licensing and a bigger role for the FERA and MRTP companies and Indian companies with foreign equity upto 40%. Also, the private sector has been asked to make larger investments in the communications sector, while the government has restricted its own participation in the proposed electronics switching unit based on indigenous development. The government investment in this venture will now be restricted to 26%; a private sector party will be offered 25% while the remaining 49% will be thrown open to the general public.

Steps have also been taken to ensure an influx of new brand names into the TV market. Henceforth, Indian companies, including those with foreign equity of 40% or less, will not be debarred from any field of electronics open to the organised private sector. Also, the government has invited foreign equity companies (with more than 40% foreign equity) to set up manufacturing facilities for electronic components, materials and related technologies in which the country has been unable to invest sufficiently in research and development.

The inflow of technology has also been made less cumbersome. The new package states that import of technology will be permitted freely to facilitate development of an appropriate electronics base. The scope for centralised purchase of technology has also been minimised, for it will now be resorted to only in cases where a variety of technologies render indigenous products expensive, when compared to international prices.

The number of electronic items exempted from the MRTP Act have also been increased and now include electronics, computers, broadcasting equipment, control instrumentation, communication equipment, industrial and professional electronics. The concept of broad banding of industrial licences has also been extended to electronics to ensure optimal utilisation of investments—broad band licences will be issued for items of entertainment electronics, including TV, radio, tape recorder, electronic toys, as also for computer peripherals, semi-conductor devices and electronic test and measuring instruments.

Financial institutions will, henceforth, have special cells for electronics. It has been made compulsory for all electronic units to submit a single proforma every year so that the government has sufficient data for planing the industry in an integrated manner. The government has also proposed to scrap the reservation for the small sector in case of some components to encourage large-scale production.

And, apart from this new electronics package, the government has also proposed to suitably extend the computer policy to electronic con-

struction and professional electronics. All these measures were adopted with a view to raising the electronics production to Rs 10,000 crores in the year 1989-90.

NCAER REPORT

ACCELERATED GNP

A paper on Indian economy prepared by the National Council of Applied Economic Research (NCAER) contends that the structural changes in income, consumption and savings, over the years, contain a whole set of stimuli for the growth potential of the economy in the coming years. The Gross National Product (GNP) has also accelerated. The compound rate of growth of GNP for the period 1961-62 to 1973-74 was 3.31% and for the period 1973-74 to 1983-84 was 4.01%. This acceleration, according to the paper, is statistically significant but would have been sharper if the GNP had not been underestimated in the official national accounts. This underestimation is specially marked in the organised manufacturing sector and in the unorganised or informal manufacturing sector.

On the consumption side, while the share of total consumption expenditure had exhibited a rising trend until the mid-seventies, with some vicissitudes, it had taken a fairly marked downward trend after that. This meant an increase in the area of discretion in the budgeting of household expenditure. A marked spurt in the share of expenditure on protective foods such as fats, pulses, sugar, vegetables, meat, fish, eggs and fruits was also evident. But, while there was progress towards self-sufficiency in foodgrains, production of protective foods did not increase to this extent. Consequently the thrust in agriculture must now respond to the shift in the demand pattern by moving away from cereals to types of protective foods, without ignoring the demand for cereals.

The share of household expenditure on non-food consumer goods has increased with a substantial increase in the share of consumer durables. However, the paper also stresses the need for making domestically produced goods competitive in quality and price since the growing maturity of consumer decision-making may also make smuggling a profitable business. Therefore, taking into account these changes in the patterns of aggregate consumption, the need for liberalisation of consumer goods production has become imperative. A suggested solution is that the cost of production could be directly reduced by a downward adjustment in indirect taxes on manufacturers. Also, a 10% cut in the indirect taxes on the manufacturing sector may well have a salutary effect on the economy. The paper also suggests that food subsidy can be brought down by reducing the coverage of the public distribution system.

And, on the saving side the paper contradicted the Seventh Plan estimate that the saving rate would reach its peak of 26% in the last year of the Sixth Plan. For, the preliminary estimates for 1983-84 put the savings rate at a mere 3.7%. However, the paper categorically pointed out that any attempt to force the pace of savings for the sake of additional resources, in the short run, may have an adverse effect on consumption.

BRITAIN'S FILM RENAISSANCE

British film-making is fast recovering from the doldrums that afflicted it in the 1960s and 1970s, when Britain's film producers were eclipsed by the great international acclaim that met their fellow-countrymen working in TV and theatre. The revival of the industry has been greeted with the enthusiastic approval of both audiences and critics, the high point of this being the award of Oscars for best picture in 1982 and 1983 to *Chariots Of Fire* and *Gandhi* respectively.

That trend is continuing with ever-increasing vigour in 1985, which has been officially designated as British Film Year in a £1m promotional initiative backed by the government, the domestic film industry and private industry. Described as "one of the most important cultural projects in the world today", by the Minister for the Arts, Lord Gowrie, the initiative has been endorsed by the US Academy Awards for 1985, just announced. Two British films, *A Passage To India* and *The Killing Fields*, picked up five Oscars between them.

In view of the accolades that British films are receiving, one cannot help but agree with Lord Gowrie that "this is a remarkable time of revival of new kinds of film-making and artistic exploration, and of the discovery of a vast reservoir of new talent".

USSR

UNDER A NEW HEAD

Mikhail Gorbachov, the new General Secretary of the CPSU, is, at 54, the youngest member of the Soviet Union's top leadership. When news of his confirmation to the post was announced, the world knew that he was a 9-to-9, six-days-a-week worker, family man, restrained vodka imbibor, classical music fancier, hiker and reader—but little else. He has risen so fast that people have little but a superficial picture to go by.

A law graduate from Moscow State University, he is among the few top leaders in Russia with an academic background and is the most educated head of state since Lenin. It is said that he stayed in power by not taking risks. He was elevated to full membership of the ruling politburo in 1980 under Leonid Brezhnev and made his mark in the agricultural sector where he is known as an 'apostle of change'. He tried to improve the farm system by loosening bureaucratic control over farms and by giving managers power in decision-making. A second plan was to make wages more directly dependent on results and to encourage this, workers were put on a so-called team contract under which they effectively subcontracted work from managers and split the profits. This scheme helped raise productivity rates in most regions and brought Gorbachov into the limelight.

His style is very different from the stolid, intensely private behaviour of most Soviet leaders. During the February national elections, he brought his wife, daughter and grand-daughter with him to the polling booth. His wife, Raisa, too, is very different from the wives of former Soviet leaders. A former student of philosophy at Moscow State University, she is glamorous and very much her husband's companion. She accompanied him on a trip to Britain and caused a sensation among the photographers.

Gorbachov is also publicly affable and foreign leaders have been impressed by his humour. On a tour of the British Museum, where Karl Marx wrote part of his *Das Kapital*, he exclaimed, "If people don't like Marxism, they would blame the British Museum". Yet, he is a cool, reflective man, capable of steady reserve.

He, in fact, is a perfect example of the New Guard, raised after the Stalinist horrors and to whom the catastrophe of World War II is but an adolescent memory. The West feels that he is someone with whom it can do business. Yet, he is just as determined as the Old Guard on basic Soviet policies towards the West; and there is no indication that he will be more yielding on matters like the MX missile or Reagan's "Star Wars" plans than Chernenko.

Gorbachov is essentially a 'Europeanist' and he took pains to demonstrate the fact even at Chernenko's funeral by his effusive welcome of European dignitaries. And, as all Europeanists, he too believes that the best way to undermine American strength is to drive a wedge between the US and its West European allies. Needless to say then, that the Americans are slightly apprehensive about Gorbachov. Western Europe, on its part, views him as a pragmatist who may inject the much needed decentralisation and flexibility into the Soviet system, setting a new trend for them to ape. More likely than not Gorbachov will be sympathetic to their appeal. As far as the crucial relations between the two superpowers go, Gorbachov being young, and likely to outlast the septuagenarian American President, he will perhaps prove to be a more formidable adversary.

IRAN-IRAQ

AND WAR GOES ON

"Every punch will be answered by a harder punch". So said Iranian President Ali Khamenei during a sermon at Tehran University, after a terrorist made a human bomb of himself, killing himself along with five other persons.

The on-again-off-again fighting between Iran and Iraq which has been continuing for over four years was on again in March. This time it began with an Iraqi air attack on an incomplete Iranian nuclear power plant at Bushehr on the Persian Gulf coast. An agreement of June 1984 to keep off was violated again as both Baghdad and Tehran came in for air attacks. Baghdad's Rafidain Bank was shattered by a bomb blast, which the Iranians claimed was a ground-to-ground scud missile fired

from 100 miles away. The Iraqi city of Basra too was badly shelled and was in danger of falling into Iranian hands as their troops reached the Baghdad-to-Basra highway. However, the Iraqis brought up reinforcements and halted the Iranian drive. The Iranians also accused Iraq of again using chemical weapons but the accusation has not yet been confirmed. In the various attacks on civilians, at least 500 people have been killed on both sides.

Peace seeking missions were kept busy through the month. The Algerians, who had presided over an Iran-Iraq deal in 1975, Sweden's Olaf Palme and the UN's Perez De Cuellar all took interest, while for the non-aligned movement, Rajiv Gandhi sent a peace mission to Teheran. The Gambian chairman of the Islamic Conference Organisation was in Saudi Arabia in late March to discuss possible peace moves. Iraq has hinted at concessions over the disputed Shatt-el-Arab waterway at the head of the Gulf, better access for Iranian pilgrims to the Shia holy places of Karbala and Najaf in Iraq, and perhaps even Iranian control over Abu Musa and the Tumbs, the islands in the Strait of Hormuz which Iran seized in 1971. However, Ayatollah Khomeini wants to destroy Iraqi President Saddam Hussein and overthrow the Baath party and will accept nothing less. Hussein is not likely to assent to his own downfall. Further, both sides have enough weapons and have been skirting out enough oil to keep their people fed and clothed.

Meanwhile despite the various overtures by concerned countries to end the Gulf war, the war is continuing, on a more intensive scale. In the latest bout of fighting, well over a hundred people were killed in a major Iraqi bomb attack on Teheran. Apart from this, casualties are continuously being reported from both the countries. Under the circumstances there appears to be no end to the war in sight.

US-USSR

MYSTERIOUS MOVES

The much-awaited arms talks in Geneva began in March with much small talk in public. As to what was discussed behind closed doors, not much was known because both sides had already reached one agreement: not to discuss anything of consequence with reporters for fear of misinterpretation and jeopardisation of the talks. The three leading American negotiators are Max Kampelman, John Tower and Maynard Glitman, while their Soviet counterparts are Victor Karpov, Yuri Kvitsinsky and Alexei Obukhov.

Glitman and Obukhov are the chief negotiators on the Intermediate-range Nuclear Forces (INF) negotiations. The basic US approach is to reach an equal level of intermediate range weapons all over the world and is willing to set that level anywhere between zero and 572, the number of Pershing I and cruise missiles scheduled to be deployed in West Europe. Tower and Karpov will be the point men in the Strategic Arms Reduction Talks (START). The most difficult set of negotiations have been left to Kvitsinsky and Kampelman: President Reagan's Strategic Defence Initiative (SDI), better known as "Star Wars". While the Soviets are determined to make "Star Wars" the centrepiece of the negotiations, President Reagan declared before the negotiations that above all, "we seek agreement as soon as possible on real and verifiable reductions in American and Soviet offensive arms", thus trying to divert attention from his defensive anti-satellite weapons. The SDI is still under research and the Washington stand is that it was too early to talk about restrictions on things not yet constructed. The Soviets, however, wish to nip it in the bud.

On the European front, the Belgian Cabinet finally capitulated and decided to accept the 48 cruise missiles to which it had committed itself in 1979. Sixteen of the missiles arrived soon afterwards on Belgian soil. However, Eastern and Western Europe were again keen on making advances to each other. West German Foreign Minister Hans-Dietrich Genscher visited Moscow and Warsaw early in March. Moscow's message was that if the Kohl administration voiced disapproval of Reagan's SDI plans, it would go along with West Germany's Ostpolitik. The West German Economics Minister Martin Bangemann, also met the East German leader Erich Honecker, on Mar 12. Hungary's Foreign Minister was in London on Mar 5-7, and British Foreign Minister Sir Geoffrey Howe, was due to visit 6 East European countries in April. This frenzied exchange of visits can partly be explained by Hungarian party leader, Janos Kadar's statement: "Our politics is economics, and our economics is foreign trade".

MARCHING ORDERS

On Apr 6, yet another coup was added to the history of world politics. This time the stage for the enactment of the bloodless coup was set in Sudan. The 16-year-old Nimeiri regime was overthrown by the country's newly appointed Defence Minister, Maj Gen Abdul-Rahman Suwar Al-Dahab. Taking into consideration the prevailing turmoil in the country, the coup, far from being criticised, has been enthusiastically welcomed by the Sudanese people. And, not surprisingly, Al-Dahab's move had received instant acclaim from several countries all over the world.

For, over the years, Mohammed Jafer Nimeiri's erratic politicking had become the cause of widespread discontent. Lately, under the influence of Islamic fundamentalism, Nimeiri had, as recently as last year, imposed Islamic Sharia (jurisprudence) laws on the predominantly Christian population of southern Sudan. This oppression of the Christians had resulted in the sparking off of frequent clashes between them and the Sudanese army. And, taking his newfound Islamic fervour a bit too far, Nimeiri had even introduced public flogging, hanging and amputation as penalties for wrongdoers. Like Iran, perhaps, he too nurtured the hope of converting Sudan into a Muslim republic. But this did not deter him from oppressing the Muslim population apparently for fear of their revolting against him.

What ultimately led the country into dire straits, however, was the gross mismanagement of the economy in Nimeiri's regime. Once a country of plenty, Sudan had lately been reduced to a state where it had to seek assistance from other countries with the proverbial begging bowl in hand. Even heavy borrowing from the US was not sufficient to tide over the severe shortages of basic commodities. The problem was aggravated manifold by the influx of an estimated 10 lakh refugees from famine-stricken Ethiopia and Chad. But the faux pas which finally led to Nimeiri's ouster was his devaluation of the Sudanese dollar by a phenomenal 48%, coupled with the cutting of food subsidies. The price of bread was consequently raised, which infuriated the population, leading first to bloody demonstrations in Khartoum and then to the bloodless coup. Nimeiri had his hands full not only with national problems but international ones as well. His oppression of the Christians in Sudan evoked criticism from US and there was no love lost with Saudi Arabia, Libya or Syria either.

In these circumstances Al-Dahab decided to seize power to avoid bloodshed and to preserve the independence of the country. That, at a time, when Nimeiri was away in Cairo, conferring with Egyptian President Hosni Mubarak. The new strongman, immediately on coming to power relieved all members of the Nimeiri regime of their posts, dismissed all provincial governors replacing them with army commandos, dissolved the Parliament, disbanded the Sudanese Socialist Party and suspended the Constitution. In addition to this, he sealed off the country and declared a state of emergency. According to Al-Dahab, the army will be in power for a transitional period only after which democracy will be restored to Sudan. For the time being then, the largest country in Africa is now under military rule and whether this prolongs into another military dictatorship like in Bangladesh and Pakistan, only time will tell.

BRITAIN

STRIKING STRIKES OUT

The 51-week-old strike of mineworkers ended in March as more and more of Britain's 1,86,000 miners trudged back to work. Early in the month delegates of the National Union of Mineworkers (NUM) voted 98 to 91 to overrule Arthur Scargill, the Union's militantly Marxist leader and ended the walkout. Initially the miners of Kent and Scotland voted to continue the strike until amnesty was granted to 682 workers who had been fired during the disputes for various offenses like stealing coal and vandalism. However, the Scots capitulated and Scargill admitted that the strike was over but added that "our fight will go on".

The strike began when the Coal Board proposed to close 20 money-losing pits and lay off about 20,000 miners. However, the union was sharply divided and about 26% of the workers continued to work. Steelworkers, too, did not give their support, and although the dockworkers called a sympathy strike, they could not hold it together. The country was also going through a recession period and under PM Thatcher's tough stand on the closures, the mineworkers too, were not ready to suffer more. Further, Britain has developed its North Sea oil and gas fields and has become less dependent on coal. The government

also has ample reserves of coal. Thus, the miners decided to resume work.

The cost of the strike, however, has been heavy. It has resulted in 14 deaths, 9,808 arrests and many injuries on the picket lines. There has also been a \$3b loss in output and other economic consequences. Further, it has highlighted the fact that the labour movement in Britain is not as united as in earlier years. The Labor Party splintered in 1981 when many leading moderates formed their own separate Social Democratic Party. Quite a few of Labor's rank and file members have taken radical leftist position and no longer support the leadership. About 30% of union members, in fact, voted for Thatcher in the 1983 elections. There has also been a sharp decline in union membership: since 1979, the membership of the umbrella organisation, the Trades Union Congress, has fallen by 20% to about 9.6m. Part of the reason for this lies in the fact that the nature of jobs in Britain is changing. While old line industries like steel and coal are shrinking, high-technology fields like computers are expanding. The latter type of industries employ white-collar educated labour, who are less receptive to union talk of solidarity and militancy. This, in fact, is happening all over Europe, and the trade union movement is facing an all-European crisis.

MIDDLE EAST

INCREASING TURBULENCE

The situation in Lebanon is again deteriorating, and this time the cause was a split in the armed militia of the Maronite Christians, known as the Lebanese forces. President Amin Gemayel, who is himself a Maronite, has over the last few months, been increasingly accepting Syrian protection against a possible Muslim takeover. Many of his leading militiamen, however, favour Israel, and some even call themselves 'Sharonites' after Israel's former defence minister, Ariel Sharon. They were greatly displeased when a high level Phalange party delegation visited Syria in late February and agreed to a new path of relations between the Phalange and Syria. Two militia leaders, Samir Geagea and Elie Hobeika revolted and called themselves the Movement for Christian Decision. Shortly afterwards, Syrian tanks reached the outskirts of East Beirut where Geagea loyalists had taken control of most Christian militia positions and units.

There was more trouble in southern Beirut where a car bomb killed over 92 persons. The attack was directed against the Hizbullah, a Shi'ite fundamentalist group, and their spiritual leader, Muhammad Hussein Fadlallah. The Hizbullah blamed the Americans for the bombing though there was no apparent link. The US deemed the situation risky and began to evacuate the American embassy. The remaining Americans were badly shaken when an American journalist, Terry Anderson, was kidnapped by an unknown group in mid-March. Israel, too, was anguished over its mounting casualties as Shi'ite guerrillas kept up their attack on them in southern Lebanon. A day after a truck bomb killed 12 Israeli soldiers, Israel mounted an attack on the Lebanese village of Zranyeh. At least 34 resistance fighters and civilians were killed.

But the situation appeared to be at an impasse. President Hosni Mubarak of Egypt flew to Washington with a peace plan which called on the US to meet with a joint delegation of Jordanians and Palestinians as a first step towards eventual peace talks with Israel. Although President Reagan gave him a polite hearing, he showed no enthusiasm because the Americans want the Palestine Liberation Organisation (PLO) to first recognise the UN Security Council Resolution 242 asking for Israel's right to exist. Further, the Reagan Administration has not at all fared well with its peace initiatives in the Middle East so far, and does not wish to burn its fingers any more. Mubarak accused the US of taking a backward step and adopting a defeatist approach. But the long and short of it is, that the problem remains unsolved.

CENTRAL AMERICA

PARTIAL RESPITES

The Nicaraguan President Daniel Ortega Saavedra and the US Secretary of State, George Shultz met in Montevideo, on the occasion of the inauguration of Julio Maria Sanguinetti, Uruguay's first democratically elected President in 13 years. This was a brief respite from the battle of words which has been going on between the Sandinistas and the Reagan Administration over the last few weeks. The propaganda battle has been aimed not so much at winning the hearts of the Central Americans as at gaining the support of US Congressmen. Congress is due to consider Reagan's request for \$14m in aid for the contras in late April or early May, and while the Reagan Administration wants to make the Sandinistas "cry uncle" (Reagan's words), the Nicaraguans are bent on derailing the aid. In this they may be

successful as a majority in both the House of Congress and the Senate against the "secret" war in Central America and disapprove of supplying covert funds to the contras. Further, according to a recent *Washington Post-ABC News* poll, 70% of those who polled stated that they were against the US involvement in trying to overthrow the Sandinistas.

Cashing in on such popular feelings, Ortega told a delegation of five US Roman Catholic bishops who had come to discuss church-state relations in Nicaragua, that the Sandinistas were willing to send home 100 Cuban advisers and to stop seeking new weapons systems including Soviet MiG aircraft. He further promised to resolve a dispute with Costa Rica so that the Contadora peace process could continue and invited a bipartisan delegation of US senators and Congressmen to verify that the military build-up of the Sandinistas was purely defensive. He reiterated his stand during his meeting with Shultz. The Americans, however, feel that this is not enough. There were 8,000 Cuban advisers in Nicaragua and about 2,000 of these were military advisers; therefore, the removal of 100 advisers would not make a dent. The Reagan Administration also wants Nicaragua to stop lending support to insurgents and terrorists in the region, meaning the Salvadoran guerrillas, and also to expand the government to include the political Opposition.

Meanwhile, in nearby El Salvador, the left-wing guerrillas struck again. A force of 400 guerrillas slipped through the army's security cordon and fired mortars at a telecommunications installation on top of the San Salvador volcano. Although the installation was undamaged the guerrillas could not be caught, showing that they are still a force to be reckoned with. The country is facing elections for a new legislative assembly on Mar 31. President Jose Napoleon Duarte's Christian Democratic Party at present holds 24 of the 60 seats. Most observers feel that it will lose two of the seats. Duarte is opposed by an alliance of three right-wing groups: the Nationalist Republican Alliance (ARENA), the National Conciliation Party and the Salvadoran Authentic Institutional Party. Together, these have 33 seats in the outgoing Assembly. The left-wing guerrillas have denounced the election as a farce and are trying to disrupt it.

BANGLADESH

ERSHAD'S CHARADE

Bangladesh came a full circle when Lt Gen H.M. Ershad re-imposed full martial law in early March, reinstituting censorship and postponing Parliamentary elections. The leader of the 15-party Opposition alliance, Hasina Wajed, and the leader of the 7-party Opposition alliance, Khaleda Zia, were put under house arrest and a number of Opposition leaders and political activists were taken into custody. The country's six universities, which are politically very active, were shut down, trade-union activities were banned and the nation's courts were closed. All political agitation was forbidden, and anti-Ershad graffiti was washed off from the walls. However, later in the month, Ershad freed a large number of political prisoners who had been detained during the February riots.

Ershad, who had earlier relaxed martial law and had agreed to hold parliamentary elections, had simply run out of patience. The opposition alliances had refused to participate in the elections unless martial law was withdrawn and the government turned over to a neutral caretaker administration. Ershad, therefore, went back on his words and decided to toe a line which resembled Zia-ul-Haq's. He called for a referendum on his government's policies, on Mar 21, the third anniversary of the bloodless coup which brought him to power. With the ban on all political activity, the arrest of prominent Opposition leaders, and the full rigours of martial law in force, the result of the plebiscite was a foregone conclusion. He secured about 80 lakh 'yes' votes and three and a half lakh 'no' votes and thus feels that his policies have been vindicated and he has been given the go-ahead to continue as President, until parliamentary elections are held. The Opposition, however, has dismissed the referendum as a farce. Early in April, Ershad announced the withdrawal of all concessions he had earlier offered to the country's opposition parties for their participation in the parliamentary poll. The next step is now awaited.

CHINA

TOWARDS CAPITALISM

Is China going capitalist? Under the impact of Deng's impressive reforms over the past five years, it would appear that market forces have begun to play an important role in the country's economy. Since 1978, there has been an average annual increase in agricultural produc-

tion of 7.5% in 1978 to \$155 in 1983 and there was a 23% increase in foreign trade last year, to a record \$49.7b.

However, in so far as capitalism means big corporations, organised labour and a rapid movement of money, China is not likely to become capitalistic in the foreseeable future. In fact, although the economic reforms continue, there has been a marked tendency to draw in the reins in the last few months. Economic liberalisation had led to an increase in lotteries, hoarding and inflated expectations. Instead of being banked or reinvested otherwise, profits from government enterprises were being too often doled out as bonuses. There is a growing concern among government officials that the economic reforms may have resulted in a drop in state revenues, the by-passing of the Communist ideology and the potential appearance of the capitalistic phenomenon—inflation.

Under the circumstances, the government has decided to apply the brakes. Lotteries have been condemned as "counter to efforts to build socialist ethics" and in mid-March, the perpetrator of the reforms, Chinese leader Deng Xiaoping declared that "the aim of China's open

WORLD'S LARGEST CITY

Chongqing, one of China's old cities, has now acquired the distinction of becoming the largest city—not only in China but in the entire world. A bird's eye view of the city has a marked resemblance to a large ship. Situated atop a bluff above the confluence of the Yangtze and Jialing rivers, Chongqing encompasses a population of 1,38,90,000 living over an area of 8,610 sq miles. Comprising of 90 districts and 12 counties, the city has undergone momentous change and rapid growth over the 40 years since the war with Japan.

In view of this phenomenal development Chongqing was given the economic and administrative powers of a province in 1983. Ever since then the city has virtually become an economic laboratory for China. In fact it is said that an idea which works in Chongqing can work anywhere else in China too!

Unfortunately, though, Chongqing is also facing some growing problems. For starters, its economy is not compatible with the large population size. Then, transportation facilities are woefully short of target too. Lack of hotel space and inadequate air service to cope with the influx of visitors is another major problem. Still, Chongqing residents are tackling these problems skillfully. The city is fast acquiring a modern look with orchestras, fox trots becoming an integral part of life—quite unimaginable only a couple of years ago.

policy is to develop socialism, not to turn the country into a capitalist economy." The government introduced a number of measures aimed at correcting the "adverse" effects of too much reform. A 10% cut in spending has been imposed on all government agencies, guidelines for bank loans have been raised to encourage saving; gold bullion has been released from government stocks to produce jewellery, which is expected to soak up dormant currency from the economy, and government agencies have been forbidden to lend government funds for private purchases.

On another front, China aims at reducing its population of over 1b to 700m in the next hundred years. In this, however, it has run into unexpected opposition. Although China denies that it uses forced abortion for birth control, the US thinks otherwise. The Reagan Administration is withholding \$23m from the US fund for population activities from China until it is certain that the fund will not be used for supporting abortion in that country.

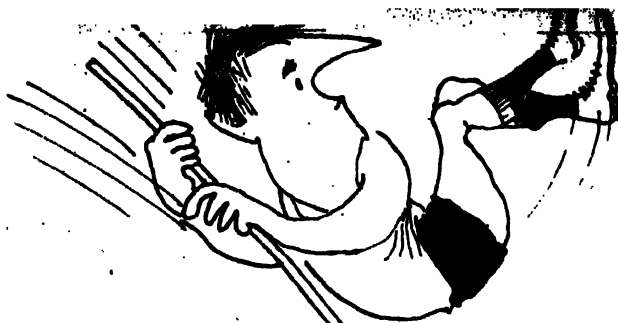
PAKISTAN

MARTIAL LAW TO MARTIAL LAW

Many Western analysts felt that Pakistan was edging towards democracy as about 53% of the electorate turned up to vote in a new National Assembly. The voters put six Cabinet ministers out of power and also proved disastrous to those groups which had aligned themselves with President Zia-ul-Haq's military regime. People assumed that the President would bow to their will and move faster towards parliamentary democracy.

But the hopes were belied. Early in March, Zia announced several amendments to Pakistan's Constitution, which was drawn up in 1973, suspended in 1977, and which the President says he intends to restore.

(Continued on page 56)



SPORTS FOR A HIGHER JUMP

It's all in the Indian game—the occasional victories, the slipped cups, and the spiritless players. And potential talent remains unrecognised. But the game has to be replayed; the entire sports pitch needs to be dug up and repaired for nurturing young talent; future sportsmen have to be coached to wrestle against the odds and their abilities perfected so that they stump the world with their glorious hit wickets. Meanwhile, we couldn't but help you to play the exam game in the right spirit by equipping you with maximum facts on our sporting scene, lest the examining umpire should declare you out!

SPORTS IN INDIA

remains a paid hobby, since sports promotion—the basis of a sporting career—in schools is just an eye-wash.

Except in games like football (Calcutta clubs), cricket (Test matches) and tennis (prize-money tournaments), most Indian sports stars earn their living through a salaried job. They are absorbed by the public or private sector in recognition of their sporting talent.

The Railways recruit the largest number of players—about 6,000 every year. Their sports budget is about Rs 24 lakhs, based on an allocation of Rs 1.50 per employee and there are nearly 16 lakh employees. This amount is distributed among the various zonal units in accordance with their staff strength and quantum of activity in various sports. With the money allotted to them, the units have to organise annual inter-divisional meets and prepare their teams for inter-railway championships and occasionally conduct a zonal tournament in a particular sport.

Jobs on sports basis in the Railways are obtained at the divisional level. The major units can employ 24 players per year, the minor 18 and others 12 per year. Depending on the educational background and achievement of the player, the salary is either in the Rs 280-400 grade or Rs 350-560 grade. International players like hockey centre-forward Mohammed Naeem are recruited as senior welfare officers with a carry-home pay

of about Rs 2,500. The Railways use sports to boost their public image. However, they follow the competitive approach, with emphasis on top performance. Jobs are mostly available in the clerical division.

In direct contrast to the approach of the Railways is the approach of the Petroleum Sports Control Board (PSCB) and the Central Public Enterprises Sports Control Board (CPESCBB). Both follow the adage of sports for all, with emphasis on recreation rather than outstanding performance. There is no recruitment of personnel just on the basis of excellence in sports. However, a person with talent gets preference in employment. Sports are used for community interaction and promoting good health with stress on inter-organisational tournaments rather than national meets.

Sportsmen and women of reasonable achievement (at least university level) can get employment in these public sector undertakings with a starting pay of about Rs 1,500. But no daily short leave is given for practice. Equal importance is attached to developing one's career and playing sports.

Players in private sector firms are employed either in the public relations or security departments. Most of them earn a monthly salary which varies from about

Rs 750 p.m. for a new aspirant to about Rs 5,000 p.m. paid by Nirlons to Sunil Gavaskar. Some firms like JCT Mills, Pragwara, Mafatlal and Tatas employ players (mostly football) on a yearly contract basis. Most of the football players of Tatas are from Kerala, Goa and Karnataka and earn about Rs 4,000 p.m. However, for most players in the private sector, jobs are available mostly in the clerical division. Sportsmen and women in this sector enjoy a distinct advantage over their public sector counterparts as they get a much higher diet and kit allowance. Asiad probables from the Tatas, TELCO and TISCO got extra diet allowance of as much as Rs 50 per day as compared to Rs 2 per day of athletes from the Police and Railways.

Besides employing players, the private sector plays a vital role by sponsoring numerous sports tournaments all over India (for details see pages 32-33).

In fact, almost 80% of the money spent annually on sports in India comes from private sponsors. State patronage is mainly for maintenance of stadia, creating new sports facilities, salaries of NIS coaches, foreign tours and subsidies for school and university sports.

But, the real big money in Indian sports is earned by Test cricketers and the footballers representing Calcutta's Big Three clubs—Mohan Bagan, East Bengal and Mohammedan Sporting. Test cricketers earn Rs 14,600 per Test match and Rs 3,000 per one-day international. Admittedly, from the Test match earnings, Rs 2,000 is kept in a



Mass adulation for the Test cricketers is amazing! Ptc shows Ravi Shastri obliging, his fans.

benevolent fund maintained by the Board of Control for Cricket in India (BCCI) and given to the players after they retire. As each Test player also has a lucrative job, invariably an officer status in a nationalised bank or a private firm; his annual income is considerable. The more popular Test stars obtain sizeable amounts as royalty from sports firms, by lending their names to columns, by appearing in ads and by endorsement of goods. Amongst all Indian sports stars, social mobility of Test cricketers is most rapid. The adulation and status is akin to film stars.

Leading footballers in Calcutta earn a lot of money but in an underhand manner. As the players are not officially professional, they cannot openly accept cash payments, so money is given to them in the form of kit allowance, diet and travel expenditure, etc.

Last season the highest paid player was medio Prasanta Banerjee who got around Rs 1,25,000 for his transfer from East Bengal to Mohun Bagan. However, all this money does

not come to Banerjee immediately. It is paid in instalments during the season. The lesser known players, whose informal contract may be for about Rs 40,000 or 50,000 per season, lose money because of instalment payments. Unless they become indispensable members of the team during the season, they are rarely paid their stipulated full amounts. On some pretext or the other, the clubs avoid giving the agreed sum. Also, lesser known players do not have regular agents or command ample muscle power to make sure they are fully paid. In spite of the shady deals and prevalent shambles, good soccer players earn a sizeable income from playing football. Besides the money they get from their clubs, they draw a regular salary (with little work) in jobs provided by nationalised banks or the private sector. The promise of big money and fame is a motivating factor for boys from Bengal to excel in football. Bengal, Goa and Kerala have a long tradition of involvement in football with the maximum spectator response.

Now, in spite of reasonable employment opportunities especially in popular sports like cricket, football and hockey, the number of

the school level, where the promotion of sports should really start.

In all schools in India, the annual budget allocates money for sports. Every state government provides allowances for sports in educational institutions. Yet in most cases, this financial allocation is not used for sports development or providing sports equipment for children. In Delhi, we have observed every year that the most brisk sale of sports equipment takes place between Mar 20 and 31, the closing of the financial year. After the routine inspection, the equipment is resold at a lower rate either to the shop or to unsuspecting children supposedly being favoured.

In this unseemly transaction, both the sports dealer and the PT instructor in school or the more grandiose director of physical education in college take their share of the spoils. This corrupt practice is not confined to Delhi alone but is prevalent in all cities.

Even the programmes chalked out for sports promotion in various states in India are impressive only on paper. In actuality they are just a facade to camouflage rampant corruption and stagnation at school level. For instance, in a state like Punjab, where hockey once had a fervent following, the game is in a near shambles at the grassroots level. On paper, the hockey programme seems impressive as a schedule of six months is chalked out. In reality the opposite occurs. Over 80% of the schools take the hockey schedule non-seriously by forming a team just a week or 10 days prior to the main inter-school tournament. They then lose in the first round, the kit and sticks are retrieved from the boys and hockey practice for the year ceases. Hence the flow of hockey talent in Punjab is on the decline.

It is because of such rampant corruption and nefarious practices at the school level, that sports promotion in India does not get a proper boost, in spite of reasonable opportunities and sponsorship. Children are not encouraged to play and talent at the school level is harnessed insufficiently.

NOVY KAPADIA

OVER 700m AND YET NO GOLDS

Why? Because the masses don't play; because sports has limited social acceptance; because adequate facilities are not available; because the significance of proper diet has not been understood...

The motto for success in any sports movement is 'mass participation and mastery' with emphasis on the first half of the formula. Unfortunately, the basic defect of Indian sports is that there are no systematic and scientifically planned programmes for games at the school level. Consequently, sporting consciousness and mass participation is at a very low level and confined mainly to urban areas (just 20% of the population), except in wrestling, popular in rural Punjab, Haryana and Maharashtra.

Mass participation in sports cannot be achieved in India as playfields are not available in abundance for the recreation of children. Ultra modern stadia, like the 17 constructed or reconstructed for the Delhi Asiad, are only the tip of the iceberg. They serve the finished prod-

uct only, that is the international sports star or an aspirant to that status. The newly created Sports Authority of India (SAI) have organised coaching schemes for children in various sports at the Nehru and National Stadium complexes. This is a step in the right direction but its basic value is to assist some teenaged players to develop proficiency in their sport, rather than leading to mass participation.

International sports champions in India will always remain negligible because facilities do not exist for mass participation in sports. From quantity comes quality is an old sports adage, vindicated in countries ranging from populous China and sprawling USSR to vast Australia and Brazil (in the case of football) and sparsely populated East Germany and Cuba.

An apt illustration of the negligible sports

facilities available at the school level, the base for future champions, is the disconcerting fact that out of 5,00,000 high schools in India, only 1.8% have playgrounds. Most of these 1.8% high schools with playgrounds have just a 200X100 m sports arena which is used for organised sports and recreational activities like marbles and *gooli danda* as well as events like weddings, musical nites and 'Ram Leela'.

A perusal of sports facilities in Delhi with its ultra modern 17 stadia aptly indicates the paucity of playing space for the youth. The Municipal Corporation of Delhi runs 1,500 primary schools. Of these, 540 schools do not possess anything resembling a playground while many have just the barest infrastructure. Again, less than 10% of these schools have physical instructors.

The magnificence of our stadia is rendered insignificant by the limping pace of sports promotion and mass participation.

The New Delhi Municipal Corporation (NDMC) covers an area of a little over 42 sq km. About 4,00,000 people live here. The NDMC also controls 79 primary schools. They have playfields ranging from 50 sq yds to less than half a dozen with 1.5 acre plots. Some of these schools have concrete playing surfaces of a mere 25 sq yds. The NDMC runs 16 nursery schools of which only six provide playing space with swings, slides or seesaws.

There are 700 middle and higher secondary schools run by the Delhi Administration. For every 1,200 students there is just one physical education teacher. Just six gymnasiums serve 700 schools. Only six schools have swimming pools. The sports facilities in other states are as mediocre. Catch them young (I) is just a pious homily mouthed by administrators of sport and politicians alike for nearly three decades but as a policy it is still in the formulatory phase as the basic infrastructure of sport, like playfields, is available to so few.

Ironically, in Delhi, like in other urban areas of India, spacious playing fields only exist in elitist public schools which the children of affluent people attend. In such institutions children of the pampered rich indulge in sport for leisure (except some who take to tennis seriously nowadays as there is money to be earned on the foreign circuit). Rampant apartheid exists in the availability of sports facilities amongst, for instance, the students of the elitist Modern School in Delhi and the rat-infested government schools in Mongolpuri or Trilokpuri. Sports facilities, like everything else in a class society, is only for the privileged. Yet, it is the children of the lower middle classes who mostly take to sports as a career for the sake of social mobility. Sadly, in their formative years they have limited facilities and schemes for serious practice in a particular sport. Thus Indian sport is trapped in too vicious a circle to extricate itself from it easily unless money is channelled in proper directions like increased playing areas for the young in their schools and colonies and optimum utilisation of existing facilities.

The example to emulate is obviously that of the USSR. Today there are about a million sports facilities of various kinds in the Soviet Union which are able to accommodate more than 20m people a day. Regular sports participants in the USSR today total to about 80m. Physical culture has become an organic part of the life of the people of the USSR,

which is not even remotely so in India, where in most families a sports enthusiast after a certain age is looked on as a quirk. In USSR compulsory physical education is provided to about 46m children. There are numerous participants in the USSR schoolchildren's games. Almost 37m children took part in the 1982 Games for instance. Mass contests for junior and age-group sports teams are arranged annually throughout the USSR in which 25m children participate annually. It is from such a mass base and reservoir of sports talent that world champions regularly emerge in the USSR.

The intake of nutritive diet, also essential for success in sports, receives scant attention in India. Not only are children ill-informed about the value of food, even parents and teachers have no concept about the importance of diet in sports. While conceding that about 350m Indians live below the poverty line, in urban areas where people can afford healthy food, money is wasted on spicy items like *pakoras* and *chaat* which have no nutritive value. India can never produce internationally renowned sportsmen and women when most of our players at home eat a substandard diet like *dal*, *roti*, *subzi* and *bread pakoras*. Even at the National Institute of Sports (NIS) where teams and coaches are trained, substandard food is served. There is no miracle food for athletes. What really matters is the maintenance of the right balance or the recovery of it once it has been lost.

This does not occur in India owing to the anachronistic concepts of nutrition. After extensive practice, lost energy must be replenished by having food rich in carbohydrates, like lots of jam, cakes and biscuits. Most Indian players prefer to take spicy or greasy food instead, which is detrimental to development.

A protein-rich diet helps in building tissues and strength. Sadly the quantity and quality of protein intake of an average Indian is also poor. With very little protein coming from animal foods like meat, milk and eggs (not eaten regularly by many Indians because of prohibitive costs or religious taboos), the protein which is actually eaten has a biological score of about 60 as compared to about 80 or 90 for animal protein. Children, in particular, need extra protein. However, the calorie intake is so low in India, that the protein procured is mainly used to maintain energy rather than carry out its primary function of building tissues and strength. According to the National Institute of Nutrition of Hyderabad, calorie intake of the low and middle-income groups in rural and urban areas is 775 and 820 respectively as against the recommended allowance of 1,275. Hence, unless a concerted effort is made to improve the diet of the youth and change the eating habits of Indian players, this inherent deficiency will always remain. Part of this problem could be tackled by making food a compulsory subject at schools.

Another primary malady which hinders sports in India is limited social acceptance. The prevalent notion for body contact sports is that they are the pastime of the unintelligent. Till school leaving age, participation in hockey, football, athletics and boxing is tolerated but afterwards meets with parental disapproval owing to the prevailing social stigma. Such an attitude towards body contact sports is out of tune with international requirements. Miljen Miljanic of Yugoslavia, a renowned soccer

coach, stresses that for modern football skill, intelligence and mental toughness are the three qualities most required. In India the very base is unbalanced as the intelligent boys shy away from games like football and hockey because of social ostracism. This fact is upheld by India's hockey coach for the 1984 Los Angeles Olympics, Balkishen Singh, when he said, "In my days (1940s and 1950s) whoever played top class hockey in his village or town was considered a hero and so many took to the game. Nowadays only the leftover talent with no other means of social advancement takes to hockey and standards have correspondingly declined."

This is an accurate indictment of social attitudes to sports in India. To remedy this parents must be made to realise that sport prepares a child for the competitive 20th century and helps in the moral, mental and aesthetic development of both boys and girls. The Sports Ministry and SAI must endeavour to make sports part of the Indian ethos by intensive propaganda and easily accessible playgrounds. People must be encouraged to play a friendly game on weekends which nowadays is still a stigma unless it has tournament status. 'Make the people play' should be the motto for Indian sports. Otherwise we will continue to wallow in the quagmire of mediocrity with an occasional star like P.T. Usha, Milkha Singh, Sunil Gavaskar, Vijay Amritraj, Prakash Padukone, K.D. Singh ('Babu'), Wilson Jones and Michael Ferreira developing more by accident or individual labour than any conceived design.

N.K.

HER GAMES

have carried the Indian woman to newer heights in the world of sports... and to longer lengths on the Olympic track.



Asha Agarwal (left): A marathon step ahead. Shiny Abraham (right): Just a slip between foot and the finish.

With bated breath, thousands of Indians watched their TV sets as P.T. Usha jumped one hurdle after another, coming ever closer to the finishing tape. A few more jumps and, by Jove, she was leading the race! With nails half chewed off, and half off their seats, the Indian people cheered her hoarse. Then, as the hurdlers came round for the final straight run down the track, they saw her fall back to second... third... fourth place. Disappointed that they had been deprived of a gold, oh, what a thrilling gold,

MONARCHS OF THE TRACK'

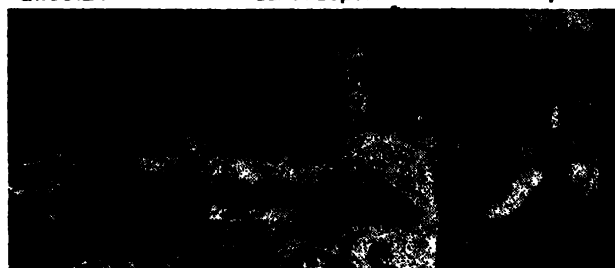
KINGS

World Champions (Helsinki 1983)			
Event	Time/ Distance	Name	Country
100 m	10.07	Carl Lewis	USA
200 m	20.14	Calvin Smith	USA
400 m	45.05	Bert Cameron	Jamaica
800 m	1:43.65	Willie Wuelbeck	FRG
1,500 m	3:41.59	Steven Cramm	G Br
5,000 m	13:28.53	Eamon Coghlan	Irl
10,000 m	28:01.04	Alberto Cova	Ita
Marathon	2:10:03.0	Robert De Castella	Aus



Sebastian Coe: World record holder for 800 m and mile.

Olympic Champions (Los Angeles, 1984)			
Time/Distance	Name	Country	
9.99	Carl Lewis	USA	
19.80	Carl Lewis	USA	
44.27	Alonzo Babers	USA	
1:43.00	Josquim Cruz	Brazil	
3:32.53	Sebastien Coe	G Br	
13:05.59	Said Aouita	Morocco	
27:47.54	Alberto Cova	Ita	
2:09:21	Carlos Lopes	Spain	



Yuri Sedykh: World record holder for hammer throw.

110 m hurdles	13.42	Greg Foster	USA
400 m hurdles	47.48	Edwin Moses	USA
3,000 m steeple chase	8:15.06	Patriz Ilg	FRG
High jump	2.32 m	Gennady Adveenko	USSR
Pole vault	5.70 m	Sergei Bubka	USSR
Long jump	8.55 m	Carl Lewis	USA
Triple jump	17.42 m	Zdzislaw Hoffman	Poland
Shot put	21.39 m	Edward Sarul	Poland
Discus	67.72 m	Imrich Bugar	Czech
Hammer	82.68 m	Sergei Litvinov	USSR
Javelin	89.48 m	Detlef Michel	GDR
Decathlon	8,666 pts	Daley Thomson	G Br
4X100 m relay	37.86	—	USA
4X400 m relay	3:00.79	—	USSR
20 km walk	1:20:49.0	Ernesto Canto	Mex
50 km walk	3:43:08.0	Rolandweigel	GDR

13.24	Roger Kingdom	USA
47.75	Edwin Moses	USA
8:11.80	Juliüs Korir	Kenya
2.35 m	Dietmar Mogenburg	FRG
5.75 m	Pierre Quinon	France
8.54 m	Carl Lewis	USA
17.26 m	Al Joyner	USA
21.26 m	Allessandro Andrei	Ita
66.60 m	Rolf Dannenberg	FRG
78.08 m	Juha Tiainen	Fin
86.76 m	Arto Haerkoenem	Fin
8,798 pts	Daley Thomson	G Br
37.83	—	USA
2:57.91	—	
1:23:13.0	Ernesto Canto	Mex
3:47:26.0	Raul Gonzales	Mex

they slumped back into their seats. But what a race it was!

The Los Angeles experience won't be forgotten in a hurry. Usha became the first Indian woman to reach an Olympic final. And took three more along with her—Shiny Abraham, M.D. Valsamma and Vandana Rao—into yet another final (4X400 m relay) where they finished seventh. Their male counterparts were nowhere in the headlines then and have made no waves on the international scene since then.

If there is a silver lining in the somewhat clouded depression confronting Indian sports (barring the glorious victory carved out by Gavaskar and his men down under), it's the very steady progress made by the Indian women on the sports field. Donning shorts and skirts, they are stepping out in increasing numbers to prove they could well be worth their weight in international gold.

What has prompted the Indian girls to take to sports? During the past decade, a regular string of successful coaching schemes were

announced at the national and state levels. Young girls, especially from the lower middle income group, came forward to take full advantage of the training given in gymnasiums and stadia. The thrill of participating in meets or matches, inside a packed stadium, was attraction enough. Sports for them has also meant a very pleasant alternative to household chores, an excellent release which, in turn, has given them a new identity.

The result of increased participation of women has shown up in the overall quality of performance in almost all games. The women's hockey, cricket and table tennis teams, for instance, look almost as professional, if not more, than their male counterparts. In this context the IX Asian Games of 1982 might well prove an important turning point in the history of women's sports in India. It was the first major international meet where Indian women earned more headlines than the men who represented India in the various events. India won the women's hockey at the Asiad convincingly, recording their most successful venture to date.

In athletics too, for the first time in India, it was the women who stole the show. Valsamma dominated the scene as she glided over the 400 m hurdles to record a spectacular win in a new Asian best of 58.47 sec. Apart from her, Usha, Shiny, Geeta Zutshi and Rita Sen were there to win medals for the country. The year appeared to have marked the beginning of a superb Indian story on the success for women's sporting ambitions.

The L.A. Olympics last year took this a step further. And now Asha Agarwal, the diminutive marathon runner, has kept the flag flying high on the international scene. On the cricketing field, Indian women fought hard against the visiting New Zealand side, last month and forced a draw—a healthy sign in terms of the progress of the sport.

Thus, women's sports have finally arrived in India and are very much here to stay. If more regular coaching programmes are organised for them, who knows within a few years it would be India striking the gold.

RANJIT BHATIA

NURSING SPORTS TALENT

is the key to redeeming India's sagging image in the world arena. Sports nurseries, which have brought fame and fortune to many countries the world over, can do the same for India...

The concept of sports nurseries has never been fully understood or properly implemented in India. Sports nurseries do exist in India, like the sports hostels in Lucknow and Meerut and the sports school in UP, sports school and college in Jullundur, sports schools in various cities in Kerala, sports school at Rai (Haryana) and the veterans club football coaching scheme in Calcutta. However, maximum benefit has not been obtained from these institutions as the approach has not been systematic and organised on scientific lines.

The example to emulate is undoubtedly that of China. Since the formation of the Communist government in 1949, the Chinese have made public sports increasingly popular and to produce champions, they have developed the 'homes of sport' concept. These are areas which, according to local interests, physique and customs, have developed one or two kinds of sports as their specialities. With long practice they consolidate and improve their standards for these sports to turn them into their traditions.

For instance, China's 'home of swimmers' is Dongguan County in Guangdong Province where, with its many lakes and rivers, at least 50% of the population can be considered competent swimmers. Swimming is so popular in the county's Daojiao People's Commune that, of a population of 40,000, some 30,000 are regular swimmers. More than 25,000 students in the county participate on their school swimming teams and over 1,000 receive systematic training in 11 sparetime sports schools, specialising in swimming. It is from quantity that quality emerges and it is this province that has produced most of China's leading swimmers (all of Asian class).

Similarly, Taishan County in Guangdong Province is China's 'home of volleyball'. This region boasts of abundant volleyball facilities and, interestingly enough, people who are taller than the average Chinese. There are 2,200 volleyball courts and 5,500 volleyball teams in the county, almost one for every production team of the people's commune. Over 300 players from this county have represented China in both men's and women's volleyball over the years. China are incidentally Olympic and World champions in women's volleyball and among the best six nations in the world in men's volleyball.

Another idea of sports nursery originated in Bulgaria. They introduced the concept of



Talent extracted! P.T. Usha owes it to her coach, Nambiar, for having reached Olympian heights.

'Specific Effort'. In the late 1960s the Bulgarians decided to be a leading weightlifting nation. After intensive scientific and medical research the authorities selected a conglomerate of village communes with a population of about 10,000 in the northern proximities of the country. The area was known to have the most naturally able-bodied men in Bulgaria and the selection for intensive training was made after scanning through all necessary bio-medical data. Then the region was flooded with the most modern weightlifting facilities and trained coaches. Within half a decade the Bulgarians matched the Russians as the leading weightlifting nation in the world. From this system emerged Naim Suleimov, the youngest lifter in history to break a world record, believe it or not, at the age of 15.

In the late 1970s Sweden, capitalising on the popularity of tennis following Bjorn Borg's legendary exploits, made tennis into a sports nursery. Courts were opened in every village and weekend tournaments were regularly organised. They are now reaping the benefits of making tennis a truly people's game. Sweden are the 1984 Davis Cup champions, their team of teenagers trouncing the seemingly invincible John McEnroe and Jimmy Connors 4-1 in the final. Also out of the best 10 men players in the world, according to ATP rankings, there are four Swedes, Mats Wilander, Henrik Sundstrom, Andrez Jarryd and Stefan Edberg.

India should emulate such examples in forging sports nurseries. If, for instance, after P.T. Usha's phenomenal success at the Olympics, the state government of Kerala had taken athletics to the people by making numerous

running tracks and jumping pits in remote areas and villages, many young girls would have taken to athletics. If systematic coaching had been provided to them, over the years maybe by the 1990s, India would have emerged as a power to reckon with in women's athletics in Asia at least. Usha has become a vogue and is a cult figure in Kerala and if her success had been capitalised on (like Sweden did with Borg), women's athletics could have been enhanced in India.

The sports hostels concept in India has produced reasonable results, especially hockey in UP. Young hockey talent from the state is assembled for specialised coaching at the sports hostels and schools. They receive education and training twice a day. There are stipends for the talented and those unable to afford fees. Many hockey internationals have emerged from this system, the most prominent being inside left Mohammed Shahid, nippy centre Mohammed Naeem, left winger Syed Ali and centre half Ravinder Pal Singh. Nine out of the 11 players in the junior Indian hockey team are from UP and the state has been national junior hockey champions for the last four years. Similarly in Kerala, athletics queens like Usha, M.D. Valsamma and Shiny Abraham are products of the sports schools system. Unfortunately these projects are limited to only a few states in India and the youngster, when given admission, is not subjected to close medical scrutiny and scientific analysis to decide if he or she has the potential to be a champion. Hence the results from these sports institutions, though satisfactory, have not had the maximum impact.

All the goodwill and sports nurseries in India cannot produce results as very few children take to sports because of lack of colony playgrounds owing to the erroneous priorities of our urban planners. Hence children are not attracted to sports, and selection for specialised sports schools is restricted to a limited few, often those with family connections or whose parents have interest in sports. Mass sport as a popular means of recreation for all age groups has never been part of the Indian milieu. So the need of the hour for Indian sports is to divert finance and facilities from the competitive sports syndrome and generate mass participation by creating spare-time sports schools and more playing facilities.

The Sports Authority of India (SAI) intends to choose certain schools in different areas for specialised coaching depending on local factors (the Chinese model). However, their efforts may be futile, unless they can get many children to regularly participate in sports. Otherwise like the SAI's recent attempt to create a swimming nursery at the Talkatora swimming pool in Delhi, all efforts will stagnate. Fifty-five school principals attended a meeting in December 1984 and were told about facilities available at the Talkatora pool, open from 7 a.m. to 7 p.m. Fees are a nominal Rs 50 p.m. in summer and Rs 100 in a heated pool in winter and just Rs 10 and 20 respectively for state level swimmers. NIS coaches are also in attendance. Yet just about 75 students from four schools in Delhi use this facility, and only three schools in the capital have their own swimming pools. A sad reflection on sports enthusiasm in the capital.



Indian coaching needs a shot in the arm! Sports nurseries, sports hostels and sports schools do exist but their approach is unscientific.

N.K.

MINIATURALISMS OF THE FEMALE QUEENS

World Champions (Helsinki, 1983)			
Event	Time/Distance	Name	Country
100 m	10.97	Marlies Gohr	GDR
200 m	22.13	Marita Koch	GDR
400 m	47.99	Jarmila Kratochvilova	Czech
800 m	1:54.68	Jarmila Kratochvilova	Czech
1,500 m	4:00.90	Mary Decker	USA
3 000 m	8:34.62	Mary Decker	USA



Mary Decker: World champ for 1,500 & 3,000 m.

Olympic Champions (Los Angeles, 1984)		
Time/Distance	Name	Country
10.97	Evelyn Ashford	USA
22.81	Valerie Brisco Hooks	USA
48.83	Valerie Brisco Hooks	USA
1:57.60	Doina Melinte	Rom
4:03.25	Gabriella Dorio	Ita
8:35.96	Maricica Puica	Rom



Evelyn Ashford: Fastest woman today.

Marathon	2:28:09.0	Grete Waitz	Norway
100 m hurdles	12.35	Bettina Jahn	GDR
400 m	54.14	Yekaterina Fesenko	GDR
High jump	2.01 m	Tamara Bykova	USSR
Long jump	7.27 m	Heike Daute	GDR
Shot put	21.05 m	Helena Fibingerova	Czech
Discus	68.94 m	Martina Opitz	GDR
Javelin	70.82 m	Tiina Lillak	Fin
Heptathlon	6,714 pts	Ramona Neuert	GDR
4X100 m relay	41.76	—	GDR
4X400 m relay	3:10.0	—	GDR

12.84	Joan Benoit	USA
54.61	Benita Brown	USA
0.02 m	Nawal El Moutawakel	Morocco
6.96 m	Ulrike Meyfarth	FRG
20.48 m	Anisoara Cusmir	Rom
65.36 m	Claudia Losch	FRG
69.56 m	Ria Stalman	Hol
5,649 pts	Tessa Sanderson	G Br
41.65	Glynis Nunn	Aus
3:18.29	—	USA
	—	USA

THE SPONSORED GAME

carries with it all the glamour of financial incentives and prestige, depending on the sponsor.

Who's the star of the Benson & Hedges World Cup cricket? Is it Ravi Shastri or his aristocratic Audi car? It would be little surprising if most cricket fans opted for the latter.

Well that's the glamour of sponsored sports today. Sponsorship itself is becoming a prestigious game with companies vying with one another—not to win a prize but give away one that is unique!

The Indian sports arena is undoubtedly commercial. Recent years have witnessed the significant role of sponsors in boosting the morale of players in the game concerned. Sponsorship also offers attractive financial incentives which go with the prestige it brings along. And if the player happens to play a winning game the laurels are shared by the player as well as the sponsor.

Riding success! Gavaskar in his Maruti car presented by Thums Up.



The present day sportsman enjoys his game almost as much as his predecessors did but the quantum and intensity of training imparted for a high level of performance is more than just time-consuming; it may even result in definite curbs on other activities. Naturally there is the desire to be compensated in some form. This need has been appreciated by the elders of sports establishments all over the world, who have indicated their willingness to professionalise sports in a more realistic manner. Leading sportsmen can enjoy financial and other benefits which make it worthwhile to remain in the sport of their choice.

Sports today are thus professional, i.e. much better organised and better supervised than ever before. The media, for its part, has accepted the changed situation, and better coverage is being given to sporting activities round the globe through radio, TV and the Press. For instance, the kind of prominence that Sunil Gavaskar enjoys in Indian sports compares favourably with the popularity of film stars.

Top level sportsmen, particularly, are far more secure than ever before. Even the enterprising sportsman can afford to plan his future with a certain degree of optimism. There are a few games where additional effort is being made in this direction. The International Amateur Athletic Federation, considered the most important wing of the Olympic movement, and



The sponsor's ad game adds spirit to the football match.

which had hitherto resisted attempts to bring in professionalism through cash incentives, has now modified its rules in order to implement measures to help the competitors, without jeopardising their amateur status. Under the scheme, athletes would be eligible to compete in prize-money meets at the national and international levels, but the benefits from such participation would be put in a trust to be utilised only after the athlete retired from sports.

It is something on the lines of the Provident Fund but with the proviso that the athlete concerned can withdraw money for education or medical purposes. Thus, it is very much on the cards that an Olympian like Sebastian Coe

as men as Bjorn Borg.

Hence, financing of sports in India would, as a consequence, become an expensive proposition, in which the token subsidy from the state or the Central Government may not prove sufficient. It is here that companies are stepping in to lend a helping hand.

The Wills one-day cricket tournament, started in 1980, to provide Indian players competitive practice in the limited-overs game, is annually sponsored by the Indian Tobacco Company (ITC). The Modi Industries conduct a Gold Cup hockey tournament at Meerut and a junior tennis tournament. In the capital, the DCM annually conducts one of Asia's premier football tournaments for clubs. The Times of India publishing group sponsors a cricket tournament in Bombay and a table tennis open tournament in Delhi and the Punjab National Bank a football tournament in Jullundur. There are also the Mohan Meakins football and volleyball championships at Mohan Nagar and Solan respectively. The Tatas, since 1983, have sponsored the only hockey tournament for schoolboys under 15. This tournament is held annually with the

Nehru hockey tournament in Delhi. Mettall Mills, Sriram Rayons, the Associated Cement Company, Dunlop India and the Vazir Sultan tobacco company are some of the other regular sponsors of sports meets. Besides these well-known firms, there are hundreds of other industrial houses—among them soft drink bottling companies, shoe manufacturers and sports goods manufacturers—which donate liberally to the national sports federations, especially during the conduct of national championships.

Sponsorships also help in giving that touch of glamour which helps to make the concerned game a little more attractive and interesting. The diehards, who oppose this kind of commercialisation, are not exactly overjoyed, but they have accepted the situation that the involvement of the industry may well help Indian sports to develop and flourish. In order to ensure the proper nurturing and growth of amateur sports in the country one has to ensure proper management through professional expertise. Which is not possible without monetary help.

R.B.

Proper nutritious food is another vital aspect of training, which the Chinese have mastered. When questioned about special food for their athletes during Asiad '82, the chief weightlifting coach confided that for their top class lifters they advocated European type of food with boiled/roast meat, steamed vegetables, fresh fruit and milk. Food supplements like Vitamins C, B and E were also being liberally used.

However, food alone is not the answer to this miracle. Their athletes have been working extremely hard and for long hours. It has taken Zhu Jianhua 10 long years to reach his present world record of 2.39 m in high jump. It may, nevertheless, be well remembered that he started at 1.10 m in 1973/74, from where he has reached his present standard by sheer hard work and determination. The Chinese gymnasts, who won the world team title in 1983, beating the mighty team of USSR, are another example of dedicated hard work—working from four to six hours a day. So also is the case with Wu Shude, their strongman, who has held six world records in the past, and is an Olympic gold medalist. While Indian weightlifters find it difficult to lift 50 tonnes in a week, the Chinese lift 100 to 110 tonnes per week. It's a lot of tough work the Chinese put in. And the results are nothing short of marvellous.

Their coaching system, which has proved its efficiency in volleyball, badminton, diving, gymnastics, basketball, weightlifting and table tennis to name a few, emphasises remarkable ability to utilise the existing resources. China does not have the type of sports infrastructure which advanced countries like USSR and GDR possess. But it has still come up by making the most of whatever facilities it has in its selection of coaches. While we in India tend to discard our former champions, the Chinese fully utilise their knowledge and expertise. This was during Asiad '82. Their coaches were usually former national or world class performers. When Huang, who bettered three world records in his prime, and was the chief coach for weightlifting, was asked whether in China one could become a coach (like it happens in India) without excelling in that sports discipline, he laughed, "How can you coach and earn respect of your pupils, unless you have yourself excelled in that discipline, and have personal experience?" This opinion was shared by all the coaches. One of the secrets of their recent success is evidently the utilisation of proven ability of former champs, who are employed as coaches.

P.K. MAHANAND

THEIR EXCELLENCE THE CHINESE

owe it to their champion coaches who adopt scientific training techniques.



Zhu Jianhua: Jumping higher since 10.

By all counts, the performance of the Chinese sportsmen at the Los Angeles Olympics with their incredible tally of 32 medals, is the biggest surprise in sports today. How is it that China, which had not taken part in the Olympics, in the past 50 years, beat the foremost Asian participant Japan, which had been cornering Olympic gold medals ever since 1928? How did the Chinese emerge as world class sportsmen in such diverse events as athletics, gymnastics, volleyball, shooting and weightlifting? This question is more pertinent as Indian athletes returned empty handed from Los Angeles.

China's laudable performance could be attributed to the fact that though China did not take part in world championships and the Olympics for a long time, they were not sitting idle. It is claimed that the Chinese athletes improved upon the world record 268 times, between 1949 and 1983. In athletics their women high jump champion Cheng Fengyong improved upon the world record in 1957. Later, another Chinese athlete Nichih Chin set a world record of 2.29 m in 1970. Chinese weightlifters had already set world records way back in 1963. Their present performance,

therefore, is no flash in the pan; it is the result of dedicated work for over three decades.

Such outstanding results are also due to nation-wide enthusiasm for sports and the government's wise policy of catching 'em young. Wu Shude, the world recorder in weightlifting, Li Ning the superlative gymnast; Zhu Jianhua, their best athlete and world record holder in high jump, were spotted at the age of 10 and have been trained since then.

Scientific training is another factor which has sky rocketed their performance. If the Chinese did not know what is scientific training, they have learnt it extremely fast. My Hongfei, the coach of Zhu Jianhua, left no stone unturned in mastering the latest training methods employed by the American and Russian high jumpers. The same is the case with their weightlifters who bagged four golds and two silvers at Los Angeles. The coaches studied the training methods adopted in USSR, GDR and Bulgaria, to evolve a scientific method of training.

THE E. EUROPEAN GOLD RUSH

is the immediate outcome of their players' penchant for perfection. And it has been so ever since they proved their worth in gold at Montreal.

There is no denying the fact that the East Bloc, viz. USSR, GDR, Poland, Bulgaria, Romania, etc have outshone sports giants like the US. This was never more evident than at the Montreal Olympics, where USSR bagged 125 medals (47 golds, 43 silvers and 35 bronzes), GDR won 90 (40 golds, 25 silvers, 25 bronzes), Romania 27 and Poland and Bulgaria 25 and 24 respectively. The US could get only 94 medals, while West Germany got 39.

After the Montreal Olympics, the Eastern Bloc has kept up its pace of victories. At the Moscow Olympics, where the US, West Germany, Japan, etc did not take part, USSR again took the lion's share of 195 medals, while GDR bagged 126. The absence of these major sports nations had deprived the Los Angeles Olympics of world champions, whose participation is looked forward to.

What are the reasons for this tremendous domination of the Eastern Bloc? First and

TRACK RECORDS

KINGS

QUEENS

Event	Time/ Distance	Name	Country	Year
100 m	9.93	Calvin Smith	USA	Jul '83
200 m	19.72	Pietro Mennea	Ita	Sep '79
400 m	43.86	Lee Evans	USA	Oct '68
800 m	1:41.73	Sebastian Coe	G Br	Jun '81
1,500 m	3:30.78	Steve Ovett	G Br	Sep '83
3,000 m	7:32.1	Henry Rono	Ken	Jun '78
5,000 m	13:00.41	David Moorcroft	G Br	Jul '82
10,000 m	27:13.81	Fernando Mamede	Por	Jul '84
Marathon	2:08:05	Steve Jones	G Br	Oct '84
110 m	12.93	Rinaldo	USA	Aug '81
hurdles		Nehemiah		
400 m hurdles	47.02	Edwin Moses	USA	Aug '83
3,000 m	8:05.4	Henry Rono	Ken	May '79
steeple chase				
High jump	2.39 m	Zhu Jian Hua	Chn	Jun '84
Pole vault	5.94 m	Sergei Bubka	URS	Aug '84
Long jump	8.90 m	Robert Beamon	USA	Oct '68
Triple jump	17.89 m	Joao de Oliveira	Bra	Oct '75
Shot put	22.22 m	Udo Beyer	GDR	Jun '83
Discus	71.86 m	Yuri Dumchev	URS	Aug '84
Hammer	86.34 m	Yuri Sedykh	URS	Jul '84
Javelin	104.80 m	Uwe Hohn	GDR	Jul '84
Decathlon	8,798 pts	Jurgen Hingsen	FRG	Jun '84
4X100 m relay	37.83		USA	Aug '84
4X400 m relay	2:56.1		USA	Oct '68
Mile	3:47.33	Sebastian Coe	G Br	Aug '81
20 km walk	1:18:40.0	Ernesto Canto	Mex	May '84
50 km walk	3:41:39.0	Yevgeniy Ivchenko	URS	May '80

Event	Time/ Distance	Name	Country	Year
100 m	10.76	Evelyn Ashford	USA	Aug '84
200 m	21.71	Marita Koch	GDR	Jun '79
400 m	47.99	Jarmila	TCH	Aug '83
800 m	1:53.28	Kratochvilova	TCH	Jul '83
1,500 m	3:52.47	Kratochvilova		
3,000 m	8:22.62	Tatyana Kazankina	URS	Aug '80
5,000 m	14:58.89	Tatyana Kazankina	URS	Aug '84
10,000 m	31:13.78	Ingvald Krestiansen	Nor	Jun '84
Marathon	2:22.43	Lilja Bondarenko	URS	Jun '84
100 m	12.36	John Benoit	USA	Apr '83
hurdles		Grzywna Rabstyn	Pol	Jun '80
400 m	53.58			
hurdles		Margarita	URS	Jun '84
High jump	2.07 m	Ponn-nareva		
Long jump	7.43 m	Ludmila Andonova	Bul	Jul '84
Shot put	22.53 m	Anisoara Cusmir	Rom	Jun '83
Discus	74.56 m	Natasha Lisovskaya	URS	May '84
Javelin	74.76 m	Zdenka Silhava	TCH	Aug '84
Heptathlon	6,867 pts	Tina Lilak	Fin	Jun '83
4X100 m	41.53	Sabine Paetz	GDR	May '84
relay				
4X400 m	3:15.92		GDR	Jun '84
relay				
Mile	4:17.44	Mancica Puica	Rom	Sep '82

These world records are upto the end of the 1984 season.

foremost, it is the desire of this Bloc to dominate the world of sports to prove that their political and social system is superior to that of capitalist countries. The whole nation is vitally concerned about producing 'world beaters'. In GDR and USSR, top sportsmen are provided excellent food, even at the time of scarcity. Western observers have noted that even if the general populace do not get enough meat, fresh vegetables and fruit, their sportsmen are provided with these in plenty. The nation as a whole does not mind being deprived of good food, if it helps their sportsmen win laurels and beat the capitalist sportsmen.

There is also a general awakening in areas of physical culture and sports, in these countries. In GDR, every third person is a sportsman while in USSR is known to be having about 50m people who actively take part in sports—35m men and 15m women. This has certainly given them a wealth of talented athletes. As soon as one star fades two others crop up to take his place. We lack this type of a system in India.

These countries are also quick to realise that medals don't hang on trees, people should have the basic facilities for winning them. USSR which leads the world in Olympics and world championships, in the medal tally, also has the best sports facilities in the world. There are 1,282 stadia in USSR with a seating capacity for more than 11.5m, more than 1,000 swimming pools and a network of 10,000 gymnasiums, in order to build up strength and power in their sportsmen. There are also more than 6 lakh sports grounds available for sports activities.

These stadia, swimming pools and gym-



Victor Saneyev. Golds and silver in leaps and bounds.

nasiums are well staffed with competent and well-qualified coaches. USSR has more than 52,000 well qualified coaches and 1,25,000 physical instructors, in addition to 9,000 vocational school coaches. And, most important, their national and world champions are not left to look for jobs as clerks, but are enrolled for physical culture right from the

beginning. As soon as he or she retires from active competition, they become coaches so that they could pass on their experience and knowledge to the youngsters.

Early spotting of talent is another vital aspect in which the Eastern Bloc has specialised. While swimmers are spotted at the early age of six, their gymnasts and weightlifters start specialising at the age of 10 or 11. After this the youth is carefully trained under watchful eyes, so that he could mature and reach world stature at the right time.

While scientific training is just a theory in our country, it is a reality for the Eastern Bloc coaches. Their doctors, physiotherapists, dieticians and scientists get together to plan the training load, diet, recovery rate of the athlete, etc. Valeri Borzov, winner of the 100 m and 200 m at the Munich Olympics, 1972 was a typical example of a product of scientific training. Add to that the inspired and determined efforts of the sportsmen and you have the key to the success of the Eastern Bloc athletes. Since winning the world and Olympic titles has a lot of benefits—better status and living conditions—their athletes work very hard. A work-out of four to six hours a day is normal. Stars like Nadia Comaneci, Victor Saneyev and Jarmila Kratochvilova of Romania worked even harder.

The emergence of the East European Bloc is, therefore, the result of intense motivation, careful planning, scientific training, involved coaches and hard work. If it is a miracle, well, they have been working hard for more than three decades to achieve it.

P.K.M.

THE MATCH OF THE DAY

is the one-day cricket. The five-day Test matches are being bowled out.

When runs flow from the willow catches are dropped or taken, fours are converted to twos or ones, sizes get stopped in mid-flight or sail over the fence... when one has to lose or win in the short span of 50 or 60 overs, there is never a dull moment.

Such thrills and nail-biting finishes have enabled one-day cricket to gain more popularity over Test cricket, especially amongst the average spectators. During a recent national survey of a cross-section of people in Australia, it was discovered that 70% preferred the one-day variety, whereas only 24% opted for Test matches. Even in India, where watching international cricket has always been a craze, in the recent series against England, all the five one-day internationals had capacity crowds whereas, except in Calcutta, attendance in the five-day Test matches was invariably mediocre.

Excessive one-day cricket does lead to a decline in standards, especially in bowling. It breeds negative bowling—containment rather than getting batsmen out becomes the aim of the bowler. Spin bowlers, except those with excellent control and accuracy, are not encouraged in one-day cricket. A young fast bowler, who has the potential to become genuinely fast but is inclined to be erratic, seeks accuracy instead of extra pace. Therefore, limited overs cricket is not very conducive to producing quality fast bowlers or subtle spinners.

The one-day game also encourages bad betting habits which are hard to eradicate and when practised in the traditional game, lead to

disastrous results. For instance, in order to score runs quickly against defensive bowling supported by run-saving fields, a batsman must play some risky strokes. Driving a good length straight ball to the midwicket boundary is exhilarating but unwise to employ in a Test match, unless you have the talent of a Vivian Richards. The limited-overs game does not provide the batsman ample time to build an innings. Hence a young player does not learn the value of grafting and building an innings.

On the other hand, there have been some distinct benefits of one-day cricket also. Running between the wickets has greatly improved, as batsmen try to steal singles off every ball. Again, improvisation of strokes, so essential in the one-day game has made batsmen more adventurous and entertaining. Most of all, the overall level of fitness and the standards of fielding have improved rapidly. As saving runs on the field helps to win matches in one-dayers, fielders are more agile—acrobatic sliding stops have become permanent fixtures. Throws to the wicket-keeper and back-up by other fielders have also become sharper and more accurate.

However much the purists and traditional supporters of Test cricket may decry the limited-overs game, the one-day game is getting increasingly popular. And judging by the success of the three Prudential Cups and the recent World Cricket Championship in Australia, it definitely has more glamour than Test cricket.

N K

volleyball stars.

A vicious circle is thus created. As cricket is popular in urban India, there are more sponsors for cricket programmes, commentaries on radio and TV and more advertisers for cricket specials in sports magazines and newspapers. Other sports have yet to acquire the marketability of cricket.

This leads to another query as to why cricket has been so effectively promoted. Owing to the status the game has acquired, each state association is managed by people of high-income groups, bureaucrats, businessmen, successful lawyers and now even politicians—all well-connected people. This is not uniformly so in other sports. These administrators use their position to successfully promote cricket. For instance, the President of BCCI is N.K.P. Salve, a former Union Minister for Steel and Mines and the Vice-President is I.S. Bindra, special adviser to the President of India. These men use their vast clout to procure benefits and financial help for cricket. As this has been the practice for years, the BCCI is the only sports body in India that is financially secure and completely independent of the government. Also, cricket is the only sport which regularly brings in foreign exchange, so government support is always forthcoming.

There is also a certain colonial tinge about cricket, played in pleasant green surroundings, with pure white clothing which appeals to the romantic and nostalgic nature of the average spectator. Scribes just capitalise on this popularity of cricket, perpetuate it and thus create a vicious circle of popularity. Class distinction has a lot to do with the hero worship of cricket stars. Test players are always from an urban environment and easily identifiable with the urban readership which forms the bulk for sports magazines and sports pages of a newspaper. Such a reader or a sports scribe who invariably comes from an urban background finds it difficult to identify with a tribal like Charles Borromeo (800 m winner, 1982 Delhi Asiad) or a rustic like heavy-weight wrestler Satpal or 20 km Asiad gold medalist Chand Ram. Sports writing, like everything else in a class society, is mainly addressed to the privileged classes.

The transistor and magazine boom in India in the last decade has taken cricket to all sections of society in urban India. Media adulation and the high income (lucrative jobs in the private sector or nationalised banks) plus other earnings from playing make fast cricketers the ideal of the youth and educated unemployed. As successful cricketers in India move in a higher social milieu than their normal middle class background would permit, the sport receives parental approval and even encouragement. This is so as such rapid social mobility is not possible in any other strata of Indian society.

Above all, cricket is better organised than any other sport in the country. It is the only sport which regularly organises on a national scale, age-group tournaments for the under-15 (Vijay Hazare Trophy), inter-state schools tournament (Cooch-Behar Trophy), inter-university tournaments (Rohinton-Baria and Vizzy Trophy for zonal teams) and for the under-21 years (C.K. Nayudu Trophy). Hence talent in cricket is better harnessed and spotted as compared to other sports in India.

N.K.

THE CRICKET CULT

is here to stay. How does the placid game hit out and make runs against other Indian games?

Cricket! It's the game people play and the cult people rave about. Today there's hardly any sport or thrill in games other than cricket. Why this supremacy of the wicket?

The popularity and craze for the game in urban India is mainly due to the in-depth coverage given to it by the media. Cricket has acquired a status in cities as the value systems prevailing are that of conspicuous consumerism. Big and medium business houses in India need winners both to market their goods and to legitimise enduring inequalities in society. Test cricketers are the visible triumphs of a system employed to exhort the rest of us to consume. They are lionised and used in ads and hoardings as a foil to the underprivileged and lower middle classes, to project the "anyone can make it" ideal.

The question now arises as to why cricket has acquired such status and glamour in India and why other games do not get similar support and promotion. The reasons are sociological, psychological, historical and socio-economic.

The serene, languid pace of the game with occasional bursts of excitement seems to



Politicians' blue-eyed game: Three cheers for Kapil Dev (with the Iran Trophy) from M P Kamal Nath.

attract the placid middle-class character of urban India. Then, again, cricket is of a longer duration. Each day's play is about five and a half to six hours, so exposure of players on radio and TV is much longer than in any other sport. This longer exposure enables the names of cricketers to be permanently etched in the psyche of the people. Any toddler can rattle off the names of a dozen Test cricketers, but, except in Bengal, would grope to name even a couple of popular football, hockey or

Deep Narayan

MONARCHS OF THE POOL

KINGS

World Champions (Guayaquil, 1982)				Olympic Champions (Los Angeles, 1984)		
Event	Time	Name	Country	Time	Name	Country
Freestyle						
100 m	50.18	Jorg Woithe	GDR	49.80	Rowdy Gaines	USA
200 m	1:49.84	Michael Gross	FRG	1:47.44	Michael Gross	FRG
400 m	3:51.30	Vladimir Salnikov	URS	3:51.23	George Dicarlo	USA
1500 m	15:01.77	Vladimir Salnikov	URS	15:05.20	Michael O'Brien	USA
Butterfly						
100 m	53.88	Matt Gribble	USA	53.08	Michael Gross	FRG
200 m	1:58.85	Michael Gross	FRG	1:57.04	Jon Seiben	Aus
Backstroke						
100 m	55.95	Dirk Richter	GDR	55.79	Rick Carey	USA
200 m	2:00.82	Rick Carey	USA	2:00.23	Rick Carey	USA
Breaststroke						
100 m	1:02.75	Steve Lundqvist	USA	1:01.65	Steve Lundqvist	USA
200 m	2:14.77	Victor Davis	Can	2:13.34	Victor Davis	Can
Individual medley						
200 m	2:03.30	Alexandr Sidorenko	URS	2:01.42	Alex Baumann	Can
400 m	4:19.78	Ricardo Prado	Bra	4:17.41	Alex Baumann	Can
Relays						
4X100 m freestyle	3:19.26	—	USA	3:19.03	—	USA
4X200 m freestyle	7:21.09	—	USA	7:15.69	—	USA
4X100 m medley	3:40.84	—	USA	3:39.30	—	USA

GOALS OF THE INDIAN STICK

are a sad case of missed hits. India is paying the penalty for not cornering the new trends in hockey.

Indian hockey has not so much declined, as the game has improved rapidly in other countries. Nevertheless, our players prefer to cling on to the erroneous belief that Indian hockey is intrinsically superior to that in the rest of the world not realising that changes in the rules of the game and the recent introduction of artificial surfaces have revolutionised hockey. Countries like Australia have developed their own style which is a combination of Asian stick work and European fitness and speed. West Germany, Holland, Spain, USSR and New Zealand, with their tactically astute and physically fit teams, have taken to hockey in a scientific manner. The game is no longer confined to the sub-continent. With so many countries taking to hockey seriously, numerous styles of play have evolved which Indian hockey, basking in past glory, is unable to cope with.

For instance, most of our club and state teams play the old style in which quick counter-attacks are almost negligible. Quick counter-attacks are used by means of an overhead pass, long scoops or quick crossfield pass— aspects of the game not common in domestic hockey. When our national team plays the European teams, they are unable to counter the accurate defence-splitting scoops of the opposition and so concede many goals.

Then there is the handicap of playing on artificial surfaces like astro-turf or polygrass, on which all international matches are played. While all other leading hockey nations acquired an astro-turf since 1976, India managed one only in 1982, for the Delhi Asiad. A small



A game unwitnessed? Hockey is losing its popularity, both with the public and media.

country like Holland has about 40 astro-turfs and they are regularly grooming their young talent (both men and women) on these surfaces. In India the priorities are lop-sided. As a developing country we cannot afford many astro-turfs, so the one at the National Stadium in Delhi ought to be utilised to the maximum. All national championships at the junior and senior levels should be played on astro-turf, so that more and more players get used to the surface. Playing on artificial turf requires extra fitness and stamina and strong leg muscles. The game on astro-turf is also very speedy, so a slow mover even with good stick work is not effective. The more the players get used to playing on artificial surfaces the better we will fare in international hockey. Yet, since 1982, only once—in February '84—has the senior national championship been held in Delhi. Even the Nehru Hockey Tournament for clubs, held annually in Delhi, is not played on astro-turf but on grass at the Shivaji Stadium as the

organisers cannot afford it. There is no proper, long-term promotion of hockey in India.

In Europe and Australia, international competitions are played in various age-groups on a league basis at the mini level (below 12 years), cadets (below 14 years), sub-junior (below 16 years) and juniors (below 20 years). Hence, they do not fear international competitions. In India, hockey at the grassroots level is stagnant. Except for the Junior Nehru Hockey Tournament and sub-junior Nehru Tournament (started in 1983), there are no organised school tournaments in India. In the Junior Nehru Tournament, mostly the same schools participate every year. Certain institutions where the game is encouraged, like the Sports College, Lucknow, B.A.V. Inter College, Meerut, State School of Sports, Jullundur and S.S. High School, Khunti have monopolised the tournament. Hence quality players do not regularly emerge as the game has not acquired a mass base.

Traditional hockey nurseries of India like Punjab and Bhopal have a sporadic flow of talent now. Factionalism has made hockey almost stagnant in Bhopal and for various socio-economic reasons the game is on the decline in Punjab. In a city like Patiala, three decades ago there were nearly 25 hockey teams regularly playing in a league; now only a few clubs are active. Even in other states there has not been a resurgence of hockey talent except amongst the Adivasis. Services, the winners of the recent National Hockey Championship, had seven Adivasi players in their playing eleven. The Adivasis have the speed, dash and mental toughness to succeed in international hockey. They could replace the Anglo-Indian community and Punjabi Muslims who migrated after partition and were once the bulwark of Indian hockey.

Pusillanimous umpiring and varied inter-

pretations of the rules have also led to a decline in the standard of the game. Most umpires in India are reluctant to award penalty corners and penalty strokes even when defenders foul inside the 25-yard line and striking circle, whereas such infringements are promptly penalised in outside countries. Indian umpires must be provided international experience so that there can be uniform interpretation of rules and our players can get used to stringent supervision.

Finally the indifference of the media has reduced the popularity of hockey. Unlike cricket, which gets wide coverage from the Press

and the electronic media, hockey gets only limited exposure. For instance, Pressmen and radio commentators are never sent abroad for international hockey tournaments, except for the Olympics. Result: the game has not caught the imagination of the public and is rapidly losing social status. A concerted effort is required to revive the sagging fortunes of Indian hockey by popularising the game at school level and ensuring that factionalism, favouritism and administrative malpractices do not jeopardise the careers of promising players.

N.K.

BENGAL COURTS THE BALL

with endearing care. The Bengali's heart beat keeps pace with the speed of the football game.

Bengal have and will continue to monopolise Indian football, as long as the three famous clubs of Calcutta, Mohun Bagan, East Bengal and Mohammedan Sporting, remain the best and most sought after teams in the country. The detractors of Bengal football maintain that it is money power of the 'big three' clubs and their subsequent pervading influence on the All India Football Federation (AIFF) which has led to their dominance of Indian football. This is partially correct as it does not explain Bengal's overwhelming superiority in domestic football. Bengal have the most outstanding record in the National Championship for football for the Santosh Trophy, having entered the final on 30 occasions, winning 21 times and being runners-up nine times. The famous Calcutta clubs have won the major tournaments of India,

Blazing a trail! Prasanta Bannerjee is one of the few highly paid players from Bengal.



Mona Choudhury

like the Durand, DCM, Rovers and Federation Cup and the IFA Shield many more times than any other club in India.

What are the primary factors for Bengal's dominance of football? Tony Greig, captain of England's cricket team to India in 1976, said, "I like touring India, as everybody likes being treated as a king." This is the main reason for Bengal's dominance of football. Crowd adulation, bordering on sheer frenzy and fanatical support has always been a spur for Calcutta clubs to strive for success and is instrumental in attracting other players to the eastern metropolis. Calcutta is the only city in India where the status of football players is high and akin to that of film stars. There are at least half a dozen magazines in Bengali, dealing exclusively with football. Successful players in Calcutta are household names and pin-up boys, a recognition not accorded to them elsewhere. More people know about international medio Parminder Singh of JCT Mills Phagwara in Calcutta than in Chandigarh or his native village. Whenever popular East Bengal win an important match their supporters celebrate by preparing Hilsa fish for dinner. The price of this fish goes up when East Bengal beat traditional rivals Mohun Bagan, such is the fanatical support. The people's involvement in football also reflects in the playing standards. The legions of lower middle class supporters, whose happiness is identified with the fortunes of the football team they support, demand success. Players are always under pressure to improve and win in Calcutta, otherwise on public

demand they are on the way out.

Another reason why Bengal has always succeeded in football is the systematic organisation. Ninety-six clubs play in four divisions in the Calcutta league every summer. In nearly each locality there is organised coaching for teenaged players. Players get regular exposure in the league and competition is intense, so even the best of footballers cannot remain slack. As football remains the dream for social mobility for most middle and lower middle class youth in Bengal, every year a stream of talented players emerge in lower division clubs. Contracts are only for one year. So even international players realise they have to produce results for their club, otherwise they can be replaced. Calcutta football does not allow stagnation. This is unlike other cities in India, where office professionalism prevails so that once a player has secured a job there is less motivation or pressure for him to improve.

Admittedly footballers in the 'big three' clubs of Calcutta are the best paid in the country. International stars like Prasanta Banerjee and Manoranjan Bhattacharya get over Rs 1 lakh per season whereas lesser known players also get in the range of Rs 40,000-70,000 per season. They also have a job, in a nationalised bank or a firm, courtesy the club. Financially footballers in Calcutta are better off than the rest of India. No wonder the best players are lured to Bengal. This is a movement common to all football playing nations. The big clubs have the best players and so get the best terms from tournament committees as they alone attract crowds. For instance, the DCM tournament in Delhi pays East Bengal or Mohammedan Sporting nearly Rs 2 lakhs as expenses and appearance money to participate in the tournament as they are crowdpullers. The clubs use this money plus members subscriptions and funds accumulated over the years to buy the best playing and coaching talent every year. Thus success continues unabated.

Tradition, years of organisation and success has enabled Bengal to acquire a mass base for football. To break Bengal's hegemony in the game, other states should popularise football, instead of adopting the gladiatorial approach, with emphasis on just a couple of clubs. Football will only improve all over India when many club teams participate in state-wide regularly organised junior and senior division league matches.

N.K.

ON THE TT TURNTABLE

several countries have performed wonders. While Asia has been hogging the limelight over the past few decades—India has failed with the pimplied bat.

The Asian dominance of table tennis which is taken for granted nowadays, really developed a little over three decades ago. Prior to that, from the period 1926 to 1951, Europe ruled the roost in the table tennis world, accounting for 109 of the 117 world titles. The Hungarians took 58 or 49.3% of the total. A major factor of the Hungarian supremacy was their innovation and use of new techniques and surfaces. The Hungarians capitalised on the discovery of the new-type pimplied rubber bat and the new chopping

game. Their innovations ushered in a new historical period by injecting vicious spin into table tennis techniques.

Japan dominated the game during the period 1952-1959. Technical innovations were again the cause of Japanese domination. They created their own style of forehand attack from slightly off the table with the pen-hold grip. They also creatively evolved and applied the sponge bat which added to their attacking style and rendered the defensive tactics of the European players obsolete. With Japan started

MONARCHS OF THE POOL QUEENS

Event	World Champions (Guayaquil, 1982)			Olympic Champions (Los Angeles, 1984)		
	Time	Name	Country	Time	Name	Country
Freestyle						
100 m	55.79	Birgit Meineke	GDR	55.92	Carrie Steinseifer	USA
				55.92	Nancy Hogshead	USA
200 m	1:59.53	Ann Marie Verstappen	Hol	1:59.23	Mary Wayte	USA
400 m	4:08.98	Carmela Schmidt	GDR	4:07.10	Tiffany Cohen	USA
800 m	8:27.48	Kim Linehan	USA	8:24.95	Tiffany Cohen	USA
Butterfly						
100 m	59.41	Mary Meagher	USA	59.26	Mary Meagher	USA
200 m	2:08.66	Ines Geissler	GDR	2:06.90	Mary Meagher	USA
Backstroke						
100 m	1:01.30	Kirstin Otto	GDR	1:02.55	Theresa Andrews	USA
200 m	2:09.91	Cornelia Sirch	GDR	2:12.38	Jolanda de Rover	Hol
Breaststroke						
100 m	1:09.14	Ute Geweniger	GDR	1:09.88	Petra Van Staveren	Hol
200 m	2:28.82	S. Varganova	URS	2:30.38	Anne Ottenbrite	Can
Individual medley						
200 m	2:11.79	Petra Schneider	GDR	2:12.64	Tracy Caulkins	USA
400 m	4:36.10	Petra Schneider	GDR	4:39.24	Tracy Caulkins	USA
Relays						
4X100 m freestyle	3:43.97	—	GDR	3:43.43	—	USA
4X100 m medley	4:05.88	—	GDR	4:08.34	—	USA

Asia's dominance in table tennis, which is continuing till now, by giving prominence to speed in the game.

From 1961 onwards China has dominated the world tables (except for a brief spell in the mid-sixties, when because of the Cultural Revolution it did not participate in international meets). China's dominance of the sport is because of the diversified playing styles of Chinese players and technical innovations. China invented the pen-hold grip close-to-table fast attacking game, developed the long pimples rubber bat and evolved a chopping game with two different surfaces. China continues to dominate international table tennis (they won six of the seven titles at stake in the last World Championships) by developing important reforms in training and in each championship it comes forward with improvements in the techniques and tactics of serving and attacking after service.

Other Asian countries which have done well in international table tennis, like North and South Korea, have also evolved styles of play which suit them and have raised the level of their technical skills. India remains stagnant in international table tennis as no creative effort to evolve unique skills, to achieve success has been made. There has been no technical innovation by India. Unfortunately even in the development of technical skills (such as loop-drives, mixed chops, variety of services) and maturity of playing style, India has made no contribution. Recently many young Indian players have had coaching stints under Chinese, Japanese and Korean coaches with emphasis on aggression and quick 'kills' instead of long rallies. Evidence of the impact of this coaching was visible at the recent 46th National Table Tennis Championship in Calcutta in the form of a drastic reduction in long rallies. However, as Indian players lack the physical fitness, ability, speed, strength and level of technical skills possessed by players from the Far East, aping their style of play

will not help. Indian players use the orthodox Western grip and not the pen-hold grip favoured by the aggressive Chinese and Japanese, which is conducive to attacking play.

The biggest drawback in Indian table tennis is that there are too few players. China has nearly a 100m people playing the sport and there are 25m registered players. India will not have more than 25,000 registered table tennis players. Quality players are limited in India and the percentage of players using different styles is negligible. Hence Indian table tennis players flounder against opponents with varying styles of play. Technical skills and mental aggression essential for improvement in table tennis remain stagnant in India, as there is not much depth in the talent available in the country.

A glaring example of the paucity of talent in Indian table tennis was revealed at the recent 46th National Championship. Railway's 40-year-old G. Jagannath, national champion in 1971 is among a dying breed of defensive

players in India. His relaxed and steady play enabled him to upset several ranked players and enabled Railways to annex the men's team title. Last year's national champion S. Srinam explained Jagannath's success as: "We hardly get a chance to practise against a defensive player. That was our nemesis."

This is the predicament of Indian table tennis. It has remained a sport of the elite, urban middle and upper classes, many of whom drop out from the game by the age of 25, in search of more lucrative careers. Unfortunately the Table Tennis Federation of India (TTFI) is more intent on organising glamour events like the Asian Cup (December 1984 in Delhi) and World Championships (at Calcutta in 1975 and at Delhi in 1987) than in making facilities easily available to popularise the sport in the country. At present the cost of the rubber on the racket and even the balls are too exorbitant for table tennis to have a mass appeal. And while the Asians dominate table tennis, India still lags far behind.

N.K.

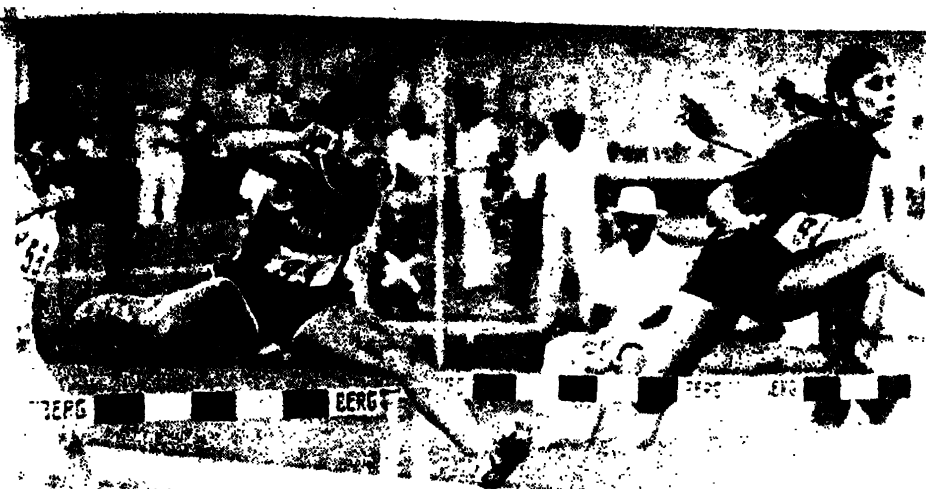
INDIA CRAWLS ON THE TRACK

despite a steady emergence of promising athletes.

In spite of an early start, the progress made by track and field athletics in India never attained the kind of dizzy heights enjoyed by games like cricket. This is probably because until recently, interest in it was confined to the Services, Police and Railways. The expansion of the national sports coaching scheme since the late 1950s, however, has done much to boost track and field events in schools and colleges. Talent of a very high order is beginning to emerge on the national scene and if the organisation of the amateur

athletic movement is streamlined, India could produce a good crop of athletes.

India's record in the Olympics has been nothing but dismal. Not a single medal has been won till date, except for the second place in the 200 m achieved by a Calcutta based Englishman, Norman Pritchard in 1900. This does not, however, detract from the fact that a number of Indian athletes have made their presence felt in the Olympic Games, chief among them being Milkha Singh who finished fourth in the 400 m final in 1960 at Rome clocking 45.73



Over the hurdles, into the lap of victory:
M.D. Valsamma crosses the 400 m hurdles in the IX Asiad.

sec, a time not bettered in Asia until last season by Japan's Susumo Takano. In the 1964 Games in Tokyo, Gurbachan Singh Randhawa was fifth in the 100 m hurdles final in a national best time of 14.09 sec (hand timed 14.0 sec). And in 1976 at Montreal, Sriram Singh was a creditable seventh in the final of the 800 m in 1:45.77. Last year, Kerala's P.T. Usha ran for the fourth position in the hurdles in 55.42 sec.

In the Commonwealth Games, India's showing since 1954 has been of a reasonable calibre. Milkha Singh won the 440 yards title in the 1958 Games in Cardiff (Wales); Praveen Kumar was second in the hammer throw in the 1962 Games and Mohinder Singh Gill finished third in the triple jump in 1970, and was second in 1974. In the 1978 Commonwealth Games, it was long jumper Suresh Babu who wound up third. The next Games are scheduled for 1983 in Edinburgh and this might provide the occasion for Usha to become India's first woman medallist in these Games.

In the Asian Games, India and Japan were leaders and strong rivals until the Chinese made their entry in 1978. Since then the Games have become a triangular contest with the Chinese steadily gaining ground. 1982 saw them moving to the top of the ladder in the IX

Asiad in New Delhi, a position that is bound to remain theirs in the next meeting in Seoul next year. India have produced many outstanding names in the Asian Games and other Asian region fixtures. Of these, Sriram Singh (800 m), Shivanth Singh (5,000 and 10,000 m), Suresh Babu (decathlon), Yohannan (triple jump), Geeta Zutshi (800 and 1,500 m) have been some of the most outstanding in recent times. Kamaljit Sandhu was India's first-ever woman gold medallist in the Asian Games when she won the 400 m in 1970.

The current list of outstanding Indians in track and field events shows a dominance of women (see page 29). Promising names among male athletes are Hakam Singh (1,500 m), Surender Singh and Charanjit Bajwa (400 m), and N. Annavi (high jump). With the next Asian Track and Field Championships scheduled for Djakarta next September and the World Cup in Canberra four weeks later, there will be much interest in athletics at the national and international levels during the coming months.

R B.

MASTERS OF THE GAME

FOOTBALL (SOCCER)

Governed by the Federation Internationale de Football Association (FIFA), founded in 1904.

Reigning champions

World Champs: Italy	
(b West Germany 3-1)	1982
European Champs: France	
(b Spain 2-0)	1984
Olympic (Amateurs): France	
(b Brazil 2-0)	1984
Asian Champs: Saudi Arabia	
(b China 2-0)	1984
National Champs: Punjab	
(b Maharashtra 3-0)	1984

Some World Cup records

- Brazil and Italy have won the World Cup (instituted in 1930 and played every four years) thrice each.
- Most goals in a World Cup: Thirteen goals by Just Fontaine (France) in six matches in 1958 (in Sweden).

- Highest score. Hungary's 10-1 win over El Salvador in Spain during the 1982 tournament.

Other records

- Greatest recorded crowd at any football match was an estimated 2,05,000 (1,99,854 paid) for the Brazil vs Uruguay World Cup final at the Maracana Stadium, Rio de Janeiro, Brazil on Jul 16, 1950
- The only country to win the Olympic football title three is Hungary - in '52, '54 and '68.

HOCKEY

Governed by the Federation Internationale de Hockey (FIH) founded in 1924

Reigning champions

Men:	
World Champs: Pakistan	(1982)
Olympic Champs: Pakistan	(1984)
National Champs: Services	(1985)
Women:	
World Champs: Holland	(1983)

National Champs: Railways (1985)

Some records:

- The record for highest score in internationals is held by India who beat the US 24-1, at the 1932 Los Angeles Olympics. Roup Singh scored 10 goals and Dhyan Chand eight
- Most Olympic titles have been earned by India—eight (1928 to 1960 and 1980).

BADMINTON

Governed by the International Badminton Federation (IBF) founded in 1934.

The premier tournament in the All-England Championship (first held in 1899), dominated by the Malaysians, Danes, Indonesians and the Chinese for the last 40 years. Eddie Choong (Malaya) won it four times (between 1953-57), Erland Kops (Denmark) seven times (between 1958-67) and Rudy Hartono (Indonesia) eight times (1968 to '74 and '76), while among women Judy Hashman (nee Devlin) won 10 times (between 1954 and '67).

Reigning champions (1984)*

Men's singles: Morten Frost Hansen (Dan)
Men's doubles: Rudy Heryanto & Harianto Kartono (Indonesia)
Women's singles: Lin Ling Wei (Chn)
Mixed doubles: Martin Dew & Gillian Gilk (Eng)

*For 1985 champs see page 32-33

In 1977, the IBF introduced the World Championships, to be held every three years.

Reigning champions (1984)

Men's singles: Luk Sugiarto (Indonesia)
Men's doubles: Steen Fladberg & Jespe Helledie (Den)
Women's singles: Lin Ling Wei (Chn)
Women's doubles: Lin Ying & Wu Dixi (Chn)
Mixed doubles: Thomas Kihlstrom & Nona Perry (Swe/Eng)

The Indian National Championships have been held since the 1934-35 season. Prakash Padukone has won it nine times in a row from 1971-72 to 1979-80.

National champions (1985)

Men's singles: Syed Modi (Rlys)
Men's doubles: Le Roy D'sa & Sanat Misra (Rlys)
Women's singles: Maithamita Bisht (Rlys)
Women's doubles: Anu Gha & Deepu (Mal)

Mixed doubles: Pradeep Gandhi & Anu Gha (Mah)

The International Team Championships are known as the Thomas Cup (for men) and Uber Cup (for women)

BASKETBALL

Governed by the International Amateur Basketball Federation (FIBA), founded in 1932.

Modern basketball was devised by the Canadian born Dr James Naismith (1861-1939) at the Training School of the International YMCA College at Springfield, Massachusetts, USA in 1891.

Reigning champions

Men:	
World Champs: Soviet Union	(1982)
Olympic Champs: USA	(1984)
Women:	
World Champs: Soviet Union	(1983)
Olympic Champs: USA	(1984)

POOL RECORDS

KINGS

Event	Time	Name	Country	Year
Freestyle				
100 m	49.36	Rowdy Gaines	USA	Apr '81
200 m	1:47.44	Michael Gross	FRG	Jul '84
400 m	3:48.32	Vladimir Salnikov	URS	Feb '83
1,500 m	14:56.35	Vladimir Salnikov	URS	Mar '82
Butterfly				
100 m	53.08	Michael Gross	FRG	Jul '84
200 m	1:57.04	Jon Seiben	AUS	Aug '84
Backstroke				
100 m	55.19	Rick Carey	USA	Aug '83
200 m	1:58.41	Sergei Zbojotnov	URS	Jul '84
Breaststroke				
100 m	1:01.65	Steve Lundqvist	USA	Jul '84
200 m	2:13.34	Victor Davis	Can	Aug '84
Individual medley				
4X50 m	2:01.42	Alex Baumann	Can	Aug '84
4X100 m	4:17.41	Alex Baumann	Can	Jul '84
Relays				
4X100 m	3:19.03	—	USA	Aug '84
freestyle				
4X200 m	7:15.69	—	USA	Jul '84
freestyle				
4X100 m	3:39.30	—	USA	Aug '84
medley				

Note: These world records are upto the end of the 1984 season.

Key: URS=Soviet Union; TCH=Czechoslovakia

QUEENS

Event	Time	Name	Country	Year
Freestyle				
100 m	54.79	Barbara Krause	GDR	Jul '80
200 m	1:57.55	Kirsten Otto	GDR	May '84
400 m	4:06.28	Tracey Wickam	Aus	Aug '78
800 m	8:24.62	Tracey Wickam	Aus	Aug '78
Butterfly				
100 m	57.93	Mary Meagher	USA	Aug '81
200 m	2:05.96	Mary Meagher	USA	Aug '81
Backstroke				
100 m	1:00.59	Ina Kleiber	GDR	Aug '84
200 m	2:09.91	Cornelia Sirsch	GDR	Aug '82
Breaststroke				
100 m	1:08.29	Sylvia Gerasch	GDR	Aug '84
200 m	2:28.36	Lina Kachushite	URS	Mar '79
Individual medley				
4X50 m	2:11.73	Ute Geweniger	GDR	Jul '81
4X100 m	4:36.10	Petra Schneider	GDR	Aug '82
Relays				
4X100 m	3:42.41	—	GDR	Aug '84
freestyle				
4X100 m	4:03.69	—	GDR	Aug '84
medley				

Note: These world records are upto end of the 1984 season.

ALL TABLES COMPILED BY S.G



Bjorn Borg: At our service.

LAWN TENNIS

Governed by the International Lawn Tennis Federation (ILTF), founded in 1913.

There are no world championships in tennis, though it was included at the Olympic Games in 1896 through 1924, and then discontinued. It will be staged once again at the 1988 Games in Seoul. Though there are no individual world championships, there is a team championship of the world, called Davis Cup.

There are four major tournaments of the

world, together called the Grand Slam.

Reigning champions

● The French Open Championships.

Men: **Ivan Lendl** (Czech).

Bjorn Borg (Sweden) won this title six times (1974-75, 1978-81).

Women: **Martina Navratilova** (USA)

● Wimbledon Championships (all-England lawn tennis championship):

Borg won this title five times consecutively from 1976-80. (All-time record is seven by William Renshaw 1881-6, '89). Helen Wills Moody (USA) won it eight times in 1927-30 1932-33, 1935 and 1938.

Maximum titles at Wimbledon: twenty. titles have been won by Billie Jean King between 1961-79 (16 singles, 10 doubles and 4 mixed doubles).

Reigning champions

Men: **John McEnroe** (USA)

Women: **Martina** (USA)

● The US Open:

Reigning champions

Men: **McEnroe**

Women: **Martina**

● The Australian Open:

Reigning champions

Men: **Mats Wilander** (Swe)

Women: **Chris Evert Lloyd** (USA)

The Grand Slam of tennis was defined as winning the four major championships in the same year.

Winners of Grand Slam:

Men: (i) **Donald Budge** (USA) in 1938,

(ii) **Rodney Laver** (Aus) in 1962 as an amateur, and again in 1969 as a professional, to become the only player in history to do the Slam twice.

Women: (i) **Maureen Connolly** (USA) in 1953; (ii) **Margaret Court** (Aus) in 1970

In the year 1983, the ILTF re-defined the Slam to mean holding of the four titles simultaneously, in any order, not necessarily in the same year. Since then **Martina** is the only one to have done the Grand Slam winning Wimbledon '83, Us Open '83, Australia Open '83, and French Open '84 (four in a row) and continued winning the Wimbledon '84 and US Open '84.

SANJEEV GUPTA

SPORTSPEECH

ATHLETICS

Baton: Metal or wooden tube, 11 in to 1 ft long and weighing not less than 1½ oz; **baton passing:** the handing on of the baton by one relay runner to a team-mate, an operation which must be completed within a 22-yd zone, 11 yds either side of each relay stage mark.

Break the start: To start before the signal is given.

Breast the tape: To finish a race; the winner's torso crosses the finishing line, marked

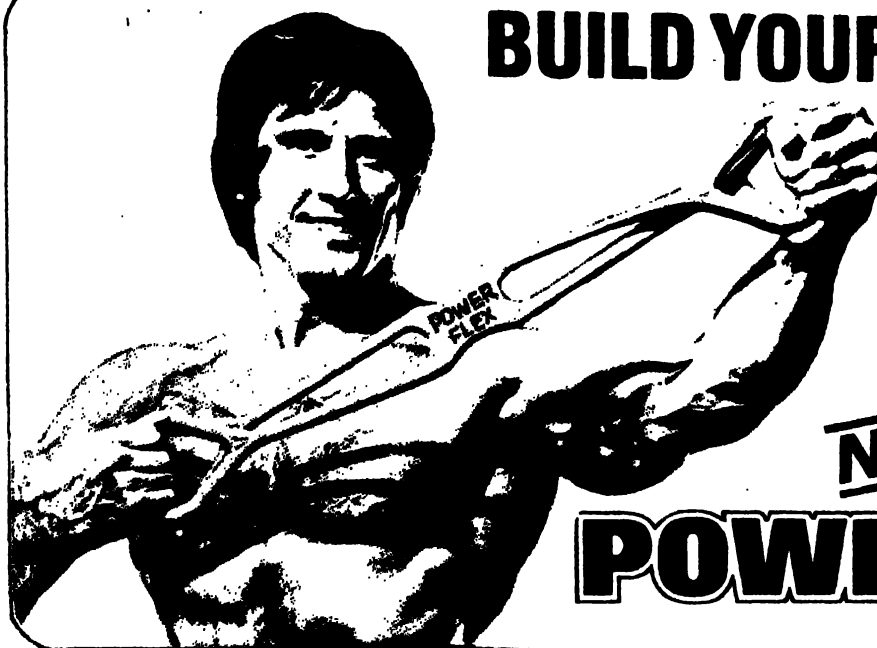
with a tape across the track at chest height.

Cross-country run: Race across a given track of country, usually including natural hazards such as stiles and ditches.

Dash: Colloquial term for a sprint, as in 100 yds dash.

Dead heat: A tie; race in which competitors finish at exactly the same time.

Decathlon: All-round contest of 10 events. In the Olympic Games these comprise: (first day) 100 m, long jump, putting the weight,



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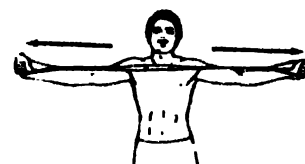
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1 jump, 400 m; (second day) 100 m hurdles, discus, pole vault, javelin, 1,500 m.

False start: Crossing of the starting-line before the signal has been given; a competitor who makes two false starts is disqualified.

Half mile: Race of 880 yds, usually two circuits of the track.

Open (of an event): Unrestricted; free to any competitor to enter.

Pentathlon: Contest of 5 events, all of which must be attempted by each entrant. In the Olympic Games, the events (for women) are: (first day) 80 m hurdles, putting the weight, high jump; (second day) long jump, 200 m.

Quarter mile: Race of 440 yds.

Run-up: Marked-out approach area for jumping and javelin events; also the approach made by an athlete in these events.

Sprint: 1. To run at maximum speed. 2. Race, usually 100 to 220 yds, in which competitors run whole distance at their maximum speed. **Sprinter:** Athlete who specialises in sprint races.

Steeplechase: Track event in which runners must negotiate hurdles, obstacles and a water jump.

Stop-watch: Watch fitted with a device by

which it can be stopped or started as desired; used to time athletic events to 1/5th or 1/10th of a second.

Straddle: Most popular high-jumping style, in which athlete approaches frontally, crosses bar horizontally and face down, rolling forward to land on his back.

Tap: Strip of worsted stretched across the track 4 ft above the finishing line to guide the judges in giving their decision.

Track: Specially prepared circuit, usually of close-packed fine cinders, on which races are held. The track may be oval or straight-sided with round ends, and usually measures 440 yds on its inside perimeter; **track suit:** loosefitting garment worn by an athlete before and between races to prevent chilling.

Veteran: Competitor 40 years old or more
CRICKET

Body-line, body-line bowling: Fast bowling consistently delivered on or outside the line of the leg stump and directed at the batsman's body with the intention of intimidating him; and now illegal.

Bosie: Term common in Australia for a **Googly**, derived from name of the player who first perfected it, B.J.T. Bosanquet.

Bye: Run scored from a legitimately

delivered ball which passes the wicket without touching the bat or batsman; **leg bye:** run scored when the ball passes the wicket after striking the batsman when he is making a stroke.

Carry one's bat: To be not out when the side's innings is completed, usually applied to a player who also opened the innings.

Chinaman: Off-break bowled by a left-handed bowler to a right-handed batsman.

Covers: Protective sheets, usually of corrugated metal and mounted on wheels, used to protect the wicket area against rain when play is not in progress.

Cress: One of the lines on a cricket pitch; **bowling cress:** line 8 ft 8 in long, with the stumps in the centre, from which a bowler delivers the ball; **popping cress:** line 4 ft in front of each wicket and deemed to be of unlimited length, at which a batsman stands to receive the bowling; when acting as a non-striker he stands behind it; if he moves outside the cress in making a stroke he may be stumped; if he fails to reach it when making a run he may be run out; **return cress:** one of the short lines marking the ends of the bowling cresses.

Dolly catch: Simple catch, easily taken by a fieldman.

Flight: To attempt to deceive the batsman by varying the trajectory of the ball when bowling; also the trajectory of the ball when bowled.

Full pitch, full toss: Delivery which reaches the batsman without pitching.

Googly: Ball bowled with what appears to be a leg-break action, but which breaks from the off when pitching (in the case of a right-handed bowler and right-handed batsman); also known as a bosie or a wrong'un.

Half volley: Ball that pitches slightly in front of the batsman.

L.b.w.: Abbreviation for leg-before-wicket. Mode of dismissal in which the batsman's leg, or other part of his body except his hand, intercepts a fairly delivered ball that would otherwise have hit the wicket.

Leg, leg-side: Playing area to the left (in the case of a right-handed batsman) of an imaginary line drawn through the middle stump of each wicket. The term is more frequently applied to that part of the ground which is also behind the wicket, as distinct from the on-side.

Long leg: Leg-side fielding position behind the batsman and close to the boundary.

Long off: Off-side fielding position close to the boundary in the area between mid-wicket and the bowler; also called deep mid-on.

Mid-off: Off-side fielding position between cover-point and the bowler.

Mid-on: Onside fielding position between mid-wicket and the bowler.

Mid-wicket: On -side fielding position between square-leg and mid-on

No ball: Ball so declared by the umpire because it has not been delivered according to the laws. A batsman may score from this with risk only of being run out.

Off, off-side: Playing area to the right (in the case of a right-handed batsman) of an imaginary line drawn between the middle stumps.

Off-spin: Spinning motion imparted to the ball so that on pitching it deviates from off to leg **Off-spinner:** bowler whose standard

(Continued on page 68)

THE SYNCHRONISED SPECTACLE



Courtesy USSR Information Centre

Two enchanting mermaids rise from the cool aquatic glory of the pool, swaying with the breeze to the sound of lilting music. The mermaids look identical to their last strand of hair and perform alike to each twist of their graceful forms. They are the synchronised swimmers who hold the audience in rapt attention whenever they perform.

The art of synchronised swimming was pioneered by the US, though the event was recognised internationally in 1952. Although many countries organised their own championships, and held international competitions it was only in 1984 that this event was included in the Olympic Games.

Equipped with the endurance of a trained swimmer, the synchronised swimmer must have the skill and artistry of a ballet dancer and the grace, rhythm and acrobatic ability of the gymnast to perform the somersaults, twists and spins and the leg and arm movements, both above and below the water level. There are three types of competitions--solo, duet and team (which consists of four or more members). Each competition has two sections, the first for stunts and the second for original interpretative free routines, set to music. The

final marks for each section are added together to declare the winner.

Five or seven judges officiate in awarding marks for the performance, from 0 to 10. The highest and lowest of these assessments are eliminated before the remaining scores are averaged to one judge. In the stunts, the averaged marks are multiplied by a degree of difficulty. These degrees of difficulty are incorporated in a final tariff table and range from 1.4 to 2.1 according to the difficulty of the particular stunt. The stunts are marked for their slow, high and controlled movements, with each part of the stunt clearly defined and in a uniform motion. The routine is to be judged as units, taking into account the perfection of strokes, stunts, and parts thereof; variety of difficulty and bill pattern; and the synchronisation of the swimmers, one with the others, and with the accompanying music.

In the stunts, the competitors wear dark-coloured costumes and plain white caps so that nothing detracts from the simple perfection of their performance. In some countries they are allowed to wear special costumes, head dresses and other clothes or ornaments, suited to the themes of their harmonic water ballet.

P.G.

Practice Tests

In preparing these tests, we have tried to visualise the questions you are likely to face in your actual exam. Great care has been taken to frame questions which are of the same standard as those you'll encounter in your exam.

Rating: Evaluate your performance on the basis of the following score-card:

- 100 questions in 60 minutes—Excellent
- 60 questions in 60 minutes—Good
- 50 questions in 60 minutes—Fair
- 35 questions in 60 minutes—Poor

Tips: 1 Do not waste time over questions you are not sure about. 2. Give the problems some thought before choosing the answers. 3. Read the directions carefully before answering the questions. 4. Do not try to guess the answer.

General Knowledge

BY SHIV KUMAR

FOR NDA EXAM

While preparing this practice test we have kept in mind the syllabi of both the NDA GK papers. However, Geography and Science which were covered extensively in our January and February issues, respectively, have not been included.

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the question. Answers are given at the end of this test.

1. When did the Community Development Programme start in the country?
 - (a) 1950 (b) 1952
 - (c) 1956 (d) 1960
2. The Community Development Programme is now known as
 - (a) Integrated Rural Development Programme
 - (b) Rural Development
 - (c) All India Community Development
 - (d) Integrated Community Development Programme
3. The IRDP aims to raise the income of
 - (a) Farmers (b) Artisans
 - (c) Harijans (d) Rural poor
 - (e) None of the above
4. SFDA stands for
 - (a) Small Farmers Development Agency
 - (b) Scheduled Caste Farmers Demands Association
 - (c) Sikh Farmers Demands Agency
 - (d) South Asian Farmers Demands Association
5. The aim of SFDA, which was started during the Fourth Five-Year Plan is
 - (a) To help small farmers
 - (b) To benefit the weaker sections of the society in rural areas
 - (c) To help scheduled castes in rural areas
 - (d) None of the above
6. The Drought Prone Areas Programme (DPAP) aims at
 - (a) A long-term development of areas frequently affected by drought
 - (b) To provide financial aid to farmers of areas hit by drought
 - (c) To extend help to farmers in the drought-affected areas of Ethiopia
 - (d) None of the above
7. The problem of unemployment in rural areas is mainly due to
 - (a) Seasonal and under employment
 - (b) Scarcity of people for employment
 - (c) Rural people do not want to work
 - (d) None of the above
8. NREP stands for
 - (a) National Rural Employment Programme
 - (b) National Re-employment Programme
 - (c) National Regional Employment Policy
 - (d) National Regional Evaluation Policy
9. The objectives of NREP are
 - (a) to give full employment opportunities to the rural work force in local rural areas
 - (b) to give employment to rural people anywhere in the country
 - (c) to give employment to rural people outside India
 - (d) None of the above
10. The NREP was earlier known as
 - (a) Rural Employment Programme
 - (b) Rural Reconstruction Programme
 - (c) Food For Work
 - (d) None of the above
11. The NREP is being implemented as a centrally sponsored scheme, between the Centre and the states on a — basis
 - (a) 30% : 70% (b) 40% : 60%
 - (c) 50% : 50% (d) 60% : 40%
12. The National Scheme of Training of Rural Youth for Self-Employment (TRYSEM) was started in
 - (a) 1977 (b) 1979
 - (c) 1980 (d) 1983
13. The Panchayati Raj, a three-tier structure of local self-Government at the village, block and district levels was started in
 - (a) 1950 (b) 1952
 - (c) 1957 (d) 1959
14. With a view to reviewing the functioning of the Panchayati Raj institutions in the country and suggesting measures to strengthen them, a committee under the chairmanship of Ashok Mehta was appointed in
 - (a) 1970 (b) 1971
 - (c) 1977 (d) 1980
15. The cooperative system started in India in
 - (a) 1872 (b) 1904
 - (c) 1915 (d) 1925
16. Gandhiji started the Non-Cooperation Movement in
 - (a) 1920 (b) 1921
 - (c) 1922 (d) 1923
17. Gandhiji started the Civil Disobedience Movement for the first time in
 - (a) 1930 (b) 1931
 - (c) 1932 (d) 1943
18. Gandhiji preferred violence to
 - (a) Non-violence (b) Regionalism
 - (c) Cowardice (d) Bribery
19. Before he came to India, Gandhiji was in South Africa for
 - (a) 5 years (b) 10 years
 - (c) 15 years (d) 20 years
20. The largest number of cooperative societies are in the

- (b) Marketing and processing cooperatives
(c) Storage cooperatives
(d) Industrial societies
21. A three-tier well-organised structure of cooperative management is known as the
(a) Vaikunth Lal Mehta National Institute of Cooperative Management
(b) Vishnu Mahajan National Institute of Cooperative Management
(c) None of the above
22. The percentage of cooperatives operating in the rural areas is
(a) 50% (b) 55%
(c) 60% (d) 65%
23. The financial year of cooperatives starts in
(a) January (b) April
(c) July (d) October
24. The total number of cooperatives in the country is—lakhs.
(a) 2.9 (b) 3.20
(c) 3.50 (d) 3.75
25. Who gave the name UNO?
(a) Thomas Woodrow Wilson
(b) Harry F. Truman
(c) Franklin Delano Roosevelt
(d) Winston Churchill
26. The agreement to set up the UN was signed in June 1945 in
(a) New York (b) London
(c) San Francisco (d) Los Angeles
27. The original membership of the UN was
(a) 50 (b) 51
(c) 53 (d) 55
28. The Secretary-General of the UN who resigned was
(a) Sithu U Thant
(b) Dag Hammarskjöld
(c) Kurt Waldheim
(d) Trigve Lee
29. Discussions to create the UN were held in
(a) Dumbarton Oak
(b) San Francisco
(c) Paris
(d) None of the above
30. The country which left the UN membership in 1965 and rejoined in 1966 was
(a) South Africa
(b) Israel
(c) Indonesia
(d) None of the above
31. The only country expelled from UN membership, so far, is
(a) Israel (b) South Africa
(c) Taiwan (d) China
(e) None of the above
32. The total membership of the UN at present is
(a) 156 (b) 158
(c) 159 (d) 160
(e) None of the above
- UN member. The country joined the organisation in
(a) 1981 (b) 1982
(c) 1984 (d) 1985
34. A welfare state is one which looks after the
(a) Defence of the country
(b) Internal affairs of the country
(c) Internal and defence affairs of the country
(d) The maximum betterment of the people
35. The present day states are
(a) Police states
(b) Welfare states
(c) Military states
(d) None of the above
36. The Renaissance means
(a) Re-awakening
(b) Re-start
(c) Unsound sleep
(d) None of the above
37. The Renaissance period was between
(a) Mid-15th and Mid-16th centuries
(b) 13th and 14th centuries
(c) 19th and 20th centuries
38. During the Renaissance period
(a) Inventions were made
(b) Discoveries were made
(c) Inventions and discoveries were made
(d) Medical science made a steep progress
(e) None of the above
39. Leading books of the Renaissance period were
(a) *The Prince* and *The Republic*
(b) *The Republic* and *Utopia*
(c) *Utopia* and *Prince*
(d) *Leviathan* and *My Life, My Time*
40. The American War of Independence took place between 1776 and 1783 and was fought against
(a) France (b) Portugal
(c) Spain (d) England
41. The Military General of the US force during the War of Independence was
(a) George Washington
(b) General McCarthy
(c) General Dwight David Eisenhower
(d) General Ulysses Simpson Grant
42. The number of states who fought the American War of Independence were
(a) 13 (b) 15
(c) 17 (d) 25
(e) 31
43. The Declaration of American Independence was made on Jul 4, 1776 in
(a) New York (b) Boston
(c) Los Angeles (d) Philadelphia
44. The French Revolution took place in
(a) 1789 (b) 1793
(c) 1795 (d) 1796
- Revolution period was
(a) Louis X (b) Louis XI
(c) Louis XIII (d) Louis XVI
(e) None of the above
46. The fort attacked by rebels during the French Revolution was
(a) Bastille (b) Nortre-Dame
(c) Riene (d) Sien
(e) None of the above
47. The slogan of the French Revolutionary rebels was
(a) Liberty, Equality and Justice
(b) Liberty, Equality and Food
(c) Liberty, Clothes and Shelter
(d) Liberty, Equality and Fraternity
48. After the 1917 revolution the Government in Russia was formed by
(a) Bolsheviks (b) Czars
(c) Trotsky (d) Lavr Kornilov
(e) None of the above
49. During the Russian Revolution in 1917, Russia was under
(a) Nicholas I (b) Alexander II
(c) Alexander III (d) Nicholas II
50. Socialism aims at the transformation of private property into
(a) Public property
(b) Important means of production
(c) Autonomous body
(d) Mixed economy
(e) None of the above
51. In a socialistic form of society profit is controlled by the government with a view to ensuring equality of
(a) Income
(b) Expenditure
(c) Consumption
(d) Income and expenditure
52. Gandhiji's parents were
(a) Karam Chand Gandhi & Putli Bai
(b) Mohan Das and Kasturba
(c) Ranchodji and Manu Ben
(d) None of the above
53. The places associated with the life of Gandhiji were
(a) Wardha and Noakhali
(b) Madras and Calcutta
(c) London and Lucknow
(d) Washington and Dacca
54. Gandhiji's political guru was
(a) Lokmanya Tilak
(b) Gopal Krishna Gokhale
(c) Dada Bhai Naoroji
(d) M.G. Ranade
55. Gandhiji advocated cow protection on a
(a) Religious basis
(b) Moral basis
(c) Economic basis
(d) None of the above
56. Gandhiji's unique way of removing economic disparities was
(a) Satyagraha (b) Trusteeship
(c) Hijrat (d) Dharna
(e) None of the above
57. According to Gandhiji God is

- (b) Invisible and mortal
(c) Omnipotent, omnipresent and omniscient
(d) Believes in the welfare of all
(e) None of the above
58. Gandhiji derived the principle of Sarvodaya from
(a) John Ruskin's *Unto The Last*
(b) Tolstoy's *War And Peace*
(c) Karl Marx's *Das Capital*
(d) His own book *My Experiments With Truth*
(e) None of the above
59. The Indian Constitution has been amended
(a) 46 times (b) 50 times
(c) 52 times (d) 54 times
60. The politics of defection has been banned by—Constitution Amendment Act.
(a) 48 (b) 49
(c) 52 (d) 54
61. The election dispute of the President of India can be heard only by the
(a) Election Commission
(b) Election Tribunal
(c) High Court of Delhi
(d) Supreme Court
62. The Vice-President of India is elected by
(a) The Rajya Sabha
(b) The Parliament
(c) The State Legislatures
(d) The Parliament & the State Legislatures
(e) None of the above
63. The Rajya Sabha is presided over by
(a) The President
(b) The Vice-President
(c) The Prime Minister
(d) The Speaker of the Rajya Sabha
64. The number of schedules in the Indian Constitution are
(a) 7 (b) 8
(c) 9 (d) 12
65. Is the President of India a member of the Parliament?
(a) No
(b) Yes
(c) He is a member of the Rajya Sabha
(d) None of the above
66. How many times have the Lok Sabha elections taken place?
(a) 7 (b) 8
(c) 9 (d) 10
67. The Rajya Sabha members are elected by the
(a) Lok Sabha members
(b) State Legislatures
(c) Members of municipal corporations
(d) None of the above
68. The final decision on whether a Bill is a Money-Bill or not is given by

- (b) The President
(c) The Prime Minister
(d) Speaker of the Lok Sabha
69. Till this day internal emergency has been declared
(a) Once (b) Twice
(c) Thrice (d) Never
70. The Supreme Court judges are appointed by
(a) The Parliament
(b) The President
(c) The Prime Minister
(d) None of the above
71. The Attorney General who is the highest legal adviser to the government of India and can appear on behalf of the Central Government throughout the country has qualifications equal to
(a) The Chief Justice of India
(b) The Judges of the Supreme Court
(c) The Judges of the High Court
(d) None of the above
72. Who participates in the proceedings of the Parliament without a right to vote?
(a) The President
(b) The Vice-President
(c) The Chief Justice of India
(d) The Attorney General
73. The Governor of a state is appointed by
(a) The President
(b) The Vice-President
(c) The Parliament
(d) The Prime Minister

ERRATA

In *A To Z Of Science* (Feb '85) in the definition of 1 joule (*Energy*), read 1/g kg in place of 1 kg

The information given in the table of blood groups (*The Body Beautiful*) should be as follows:

Group	Content
B	Antigen B and Anti-A
O	Anti-A and Anti-B

and not what has been published. The source of our information was *The Question And Answer Encyclopedia Series: The Body Machine*.

The definition of *Innervation* should read as follows—'The distribution of nerves to an organ' while that of *Osmosis* as—'Diffusion of a solvent through a semi-permeable membrane into a more concentrated solution tending to equalise the concentrations on both sides of the membrane'.

In the *Practice Tests (Science)* for NDA, POs, CDS in Q 5 of Section 1, read 'decrease' instead of 'increase'; in Q 12 choice (d) read 7 m in place of 3 m; and in Q 86 read 'stellite' instead of 'satellite'. In Q 49 of Section 2, 'in addition to iron' should be added as the last line.

The answers to Q 101 (Section 1), Q 32 and Q 42 (Section 2) should read as (d), (a & d) and (a & c) respectively.

- (a) The President
(b) The Prime Minister
(c) The Parliament
(d) The State Legislature
(e) The state Chief Minister concerned
75. The presidential elections in the country have taken place
(a) 6 times (b) 7 times
(c) 8 times (d) 9 times
(e) None of the above
76. How many Presidents of India died while in office?
(a) One (b) Two
(c) Three (d) None
77. Which part of the Indian Constitution includes the Directive Principles of State Policy?
(a) Part I (b) Part II
(c) Part III (d) Part IV
78. The Constitution of India was adopted on
(a) Sept 14, 1949 (b) Oct 20, 1949
(c) Nov 14, 1949 (d) Nov 26, 1949
79. Fundamental duties were included in the Constitution in 1976 by the
(a) 40th Amendment
(b) 42nd Amendment
(c) 44th Amendment
(d) 46th Amendment
80. The Comptroller and Auditor-General is appointed and removed by
(a) The President and the Parliament
(b) The President
(c) The Prime Minister and the Parliament
(d) None of the above
81. A candidate for the Rajya Sabha should be
(a) 25 years (b) 28 years
(c) 30 years (d) 35 years
82. The Prime Minister is responsible to
(a) The Council of Ministers
(b) The President
(c) The Rajya Sabha
(d) The Lok Sabha
83. The number of states under President's rule is
(a) 1 (b) 2
(c) 4 (d) None
84. The percentage of decrease in rural population in India between 1971 and 1981 is
(a) 3% (b) 2.4%
(c) 3.4% (d) 3.5%
85. The leaders of the six nations attending the Summit in New Delhi in January 1985 appealed to the big powers
(a) To give up the nuclear arms race
(b) To stop the launching of spacecraft
(c) To intervene in the war between Iran and Iraq
(d) None of the above
86. The pro tem speaker of the 8th Lok

- (a) Balram Jhakar
(b) Bale Ram Bhagat
(c) G. Lakshmanan
(d) Jagjevan Ram
91. The Kudal Commission which has submitted its report was appointed to enquire into the activities of
(a) Employees Provident Fund
(b) Life Insurance Corporation
(c) General Provident Fund
(d) General Provident Fund
92. James Healey, Chicago, who died recently was famous for his
(a) Writings of English
(b) Poetry
(c) Drama
(d) Dramatist
93. The Deputy Speaker of the Lok Sabha is
(a) G. Lakshmanan
(b) Nagma Heptullah
(c) M. Thambi Durai
(d) None of the above
94. The chief guest at the Republic Day parade 1985 was
(a) Dr Raul Alfonsin
(b) Miguel De La Madrid
(c) Julius Nyerere
(d) Maumoon Abdul Gayoom
(e) None of the above
95. The Governor of the Reserve Bank of India is
(a) Man Mohan Singh
(b) R.N. Malhotra
(c) Dr I.G. Patel
96. The 1984 Nehru Award for International Understanding went to
(a) Mother Teresa
(b) Julius Nyerere
(c) Margaret Thatcher
(d) Indra Gandhi
97. The US has withdrawn and the UK intends to leave the
(a) UN
(b) UNESCO
(c) World Bank
(d) None of the above
98. The first woman to walk in space is
(a) Sally Ride
(b) Svetlana Savitskaya
(c) Valentina Tereszkova
(d) None of the above
99. Which of the following states did not go to polls in the Lok Sabha elections in December 1984?
(a) Punjab
(b) Nagaland
(c) Assam
(d) Manipur
(e) Meghalaya
100. The total number of seats contested in the Lok Sabha elections, 1984 were
(a) 492
(b) 502
(c) 508
(d) 526
101. Where was the 10 International Film Festival of India held?
(a) Bombay
(b) New Delhi
(c) Calcutta
(d) Madras
102. How many states and Union territories went to the polls in March 1985?

- (b) 12 states and two Union territories
(c) 11 states and two Union territories
(d) 12 states and one Union territory
103. The number of states not under the Congress(I) rule is
(a) 5
(b) 6
(c) 7
(d) 8
104. Kumar Gandharva, a leading vocalist, received the Kalidas Award which is given by the government of
(a) MP
(b) UP
(c) Karnataka
(d) Maharashtra
105. Israel has recently withdrawn its forces from
(a) Lebanon
(b) Egypt
(c) Jordan
(d) None of the above
106. Noted Urdu writer and producer-director of Hindi movies who died recently was
(a) Shahid Latif
(b) Krishan Chandra
(c) K.A. Abbas
(d) Rajinder Singh Bedi
107. The Judicial Commission probing into the assassination of Mrs Gandhi is headed by
(a) Justice M.P. Thakkar
(b) Anand Ram
(c) L.N. Sinha
(d) Justice M.H. Beg
(e) None of the above
108. The Deputy Chairman of the Planning Commission is
(a) K.R. Narayanan
(b) Man Mohan Singh
(c) T.D. Lakdvala
(d) None of the above
109. Neutralisation of lethal methyl isocyanate (MIC) gas in Bhopal was called
(a) Operation Flood
(b) Neutralisation of MIC
(c) Operation Faith
(d) Operation Gas
(e) None of the above
110. Our neighbouring countries which recently had a referendum are
(a) Bangladesh
(b) Switzerland
(c) Pakistan
(d) Japan
(e) None of the above
111. Russia and the US had talks recently on Space and Nuclear arms in
(a) Washington
(b) Moscow
(c) Geneva
(d) Paris
(e) None of the above
112. The Fourth Indian Scientific expedition to Antarctica was led by
(a) Dr H.K. Gupta
(b) S.Z. Qasim
(c) M.G.K. Menon
(d) Dr B.B. Bhattacharya
113. Russia launched two unmanned inter-planetary stations Venera I and

- Venera II in December 1984 to study
(a) Halley's Comet
(b) Venus
(c) Mars
(d) None of the above
114. The Seventh Five-Year Plan period will be
(a) 1985-90
(b) 1986-91
(c) 1987-92
(d) None of the above
115. The first Indira Priyadarshini Award for promoting the ideas of Mrs Gandhi was given to
(a) Kamaladevi Tripathi
(b) Srikanth Verma
(c) Baba Sahib Amle
(d) Pranab Mukherjee
116. The youngest Indian chess player to get the International Master Norms is
(a) Ravi Shekhar
(b) A.N. Thepsey
(c) Rafiq Khan
(d) V. Anand
117. The headquarters of the newly formed Southern Air Command of the Indian Air Force is in
(a) Hyderabad
(b) Madras
(c) Bangalore
(d) Mangalore
(e) Trivandrum
118. The Government of India has decided to set up four more free trade zones. The earlier two zones are
(a) Vishakhapatnam and Cochin
(b) Kandla and Goa
(c) Madras and Tuticorin
(d) Kandla and Santa Cruz
119. Britain and China have signed an agreement under which the latter will, in 1997, get
(a) Macao
(b) Hong Kong
(c) Taiwan
(d) None of the above
120. The 31st National Boxing Championship (for 1984) was held in
(a) Madras
(b) Pune
(c) Hyderabad
(d) Calcutta
(e) None of the above
121. The West Indies-Australia cricket test played in Australia was won by West Indies defeating Australia by
(a) 3-2
(b) 4-1
(c) 3-1
(d) None of the above
122. The Asia Cup Football Tournament played in Singapore was won by
(a) South Korea
(b) China
(c) Kuwait
(d) Saudi Arabia
123. The Sixth Champions Cup tournament (Hockey) was won by Australia defeating Pakistan. The tournament was played in
(a) Holland
(b) Melbourne
(c) Munich
(d) Karachi
124. The Nehru Hockey tournament, 1984 was won by the Indian Air-

121. The Davis Cup Tennis Tournament, 1984 played in Gottenburg was won by USA 4-1 defeating
(a) Australia (b) France
(c) Czechoslovakia (d) Sweden
122. The National Tennis Championship, 1984 for men went to
(a) Vijay Amritraj
(b) Anand Amritraj
(c) Shashi Menon
(d) Nandan Bal
123. The women's title for the National Tennis Championship, 1984 went to
(a) Bela Pandit
(b) Nandini Rangarajan
(c) Vidya Priya
(d) Namrata Apparao
124. Om Aggarwal defeated Terry Parson in the finals of the World
(a) Billiards Championship
(b) Snooker Championship
(c) Golf Championship
(d) Badminton Championship
125. England defeated India in the one-day international matches played in India by
(a) 3-2
(b) 4-1
(c) 5-0
(d) None of the above
126. Geet Sethi was the National Billiards Champion. In the final, he defeated
(a) Michael Ferreira
(b) Syed Habib
(c) Arvind Savoor
(d) Subhas Agarwal
127. The *Communist Manifesto* was written by Marx in
(a) 1847 (b) 1848
(c) 1947 (d) 1948
128. The *Communist Manifesto* contains Marx's
(a) Political ideas
(b) Economic ideas
(c) Economic and Political ideas
(d) Economic and Historical ideas
129. Marxism advocates that
(a) Workers will overthrow the ruling class
- (b) Workers will not be covered by government
(c) Workers all over the world will be suppressed
(d) None of the above
130. Marxism believes that once the working class revolts the
(a) Society will have only the poor people
(b) Society will have all classes of people
(c) Society will be classless
(d) None of the above
131. Marxism states that all history is a struggle between
(a) King and king
(b) King and people
(c) King and Parliament
(d) Ruling class and working class
132. Democracy succeeds if a country has
(a) Freedom of the Press and equality
(b) A strong government
(c) Censorship
(d) Illiteracy
133. A well-organised party system is a must in a
(a) Democracy
(b) Monarchy
(c) Dictatorship
(d) None of the above
134. India is a leading industrial nation among
(a) Third World countries
(b) Fourth World countries
(c) Communist countries
(d) Western countries
135. India can help poor countries for the development of
(a) Agriculture
(b) Industry
(c) Space technology
(d) Industry and agriculture
136. The Bhoodan Movement was started in 1951 by
(a) Mahatma Gandhi
(b) Jaiprakash Narain
(c) Thakkar Bapa
(d) Vinoba Bhave
(e) Acharya Kripalani
137. Bhoodan Movement means
(a) Gift of Land
- (c) Gift of land to the government
(d) None of the above
138. The Bhoodan Movement was started in
(a) Pochampalli village (Andhra Pradesh)
(b) Porbander (Gujarat)
(c) Balasore (Orissa)
(d) Raipur (MP)
139. Sarvodaya means
(a) Welfare of Harijans
(b) Betterment of Asians
(c) Uplift of all religions
(d) Welfare of all
(e) None of the above
140. Sarvodaya visualises
(a) Disciplined society without the need for an administration
(b) Society free from all wants
(c) Society free from diseases
(d) None of the above
141. Sarvodaya envisages
(a) Village swaraj and planning
(b) Planning and military training
(c) Military training and village swaraj
(d) None of the above
142. Panchsheel was referred to for the first time in September 1954 when
(a) The Chinese PM visited India
(b) Pandit Nehru visited China
(c) Indian PM visited Russia
(d) PM of Indonesia visited India
(e) None of the above
143. Panchsheel got recognition for the first time in talks in June 1954 between
(a) India and China in New Delhi
(b) India and Egypt in Cairo
(c) India and Yugoslavia in Belgrade
(d) India and Egypt in New Delhi
(e) None of the above
144. The Russian Revolution took place in
(a) 1904 (b) 1917
(c) 1920 (d) 1924
145. The Russian Revolution was led by
(a) Kari Marx
(b) Joseph Stalin
(c) Vladimir Lenin
(d) Rasputin
(e) None of the above

ANSWERS

- | | | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|----------|----------|----------|--------------|-------------|----------|
| 1. (b) | 2. (a) | 3. (d) | 4. (a) | 5. (a) | 6. (a) | 73. (a) | 74. (a) | 75. (b) | 76. (b) | 77. (d) | 78. (d) |
| 7. (a) | 8. (a) | 9. (a) | 10. (c) | 11. (c) | 12. (b) | 79. (b) | 80. (a) | 81. (c) | 82. (d) | 83. (a) | 84. (c) |
| 13. (d) | 14. (c) | 15. (b) | 16. (b) | 17. (b) | 18. (c) | 85. (a) | 86. (a) | 87. (c) | 88. (c) | 89. (c) | 90. (a) |
| 19. (d) | 20. (a) | 21. (a) | 22. (d) | 23. (c) | 24. (a) | 91. (b) | 92. (d) | 93. (b) | 94. (b) | 95. (a & c) | 96. (c) |
| 25. (a) | 26. (c) | 27. (a) | 28. (d) | 29. (a) | 30. (c) | 97. (b) | 98. (a) | 99. (b) | 100. (a) | 101. (a) | 102. (d) |
| 31. (c) | 32. (c) | 33. (c) | 34. (d) | 35. (b) | 36. (a) | 103. (a) | 104. (b) | 105. (c) | 106. (a & c) | 107. (c) | 108. (d) |
| 37. (a) | 38. (c) | 39. (c) | 40. (d) | 41. (a) | 42. (a) | 109. (a) | 110. (a) | 111. (b) | 112. (d) | 113. (e) | 114. (d) |
| 43. (d) | 44. (a) | 45. (d) | 46. (a) | 47. (d) | 48. (a) | 115. (b) | 116. (d) | 117. (c) | 118. (d) | 119. (d) | 120. (a) |
| 49. (d) | 50. (a) | 51. (d) | 52. (a) | 53. (a) | 54. (b) | 121. (d) | 122. (d) | 123. (b) | 124. (b) | 125. (b) | 126. (d) |
| 55. (c) | 56. (b) | 57. (a) | 58. (a) | 59. (c) | 60. (c) | 127. (b) | 128. (d) | 129. (a) | 130. (c) | 131. (d) | 132. (a) |
| 61. (d) | 62. (b) | 63. (b) | 64. (c) | 65. (a) | 66. (b) | 133. (a) | 134. (a) | 135. (d) | 136. (d) | 137. (b) | 138. (a) |
| 67. (b) | 68. (d) | 69. (b) | 70. (b) | 71. (b) | 72. (d) | 139. (d) | 140. (a) | 141. (a) | 142. (d) | 143. (a) | 144. (b) |
| | | | | | | 145. (c) | | | | | |

Test Of Reasoning

BY KAVITA KAPOOR & B.L. ARORA

FOR BSRB (PO) EXAM

As reasoning tests form an important part of exams like BSRB (PO), these questions have been selected to help you master the techniques of tackling similar problems.

Time: 15 minutes—half a minute for each question.

Scores: 1. Give yourself one mark for each correct answer. 2. Deduct one mark for each wrong answer. 3. Then rate yourself as follows:

Excellent....27-30 Very good....23-26 Good....19-22 Fair....15-18 Poor....Below 15

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the question. Answers are given at the end of this test.

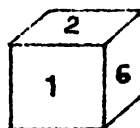
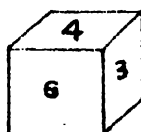
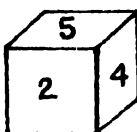
Directions: In questions 1-5, there is a series with one term missing as shown by ? Find this term from amongst the alternatives given below each question:

- 3, 5, 8, 13, 20, 31, ?
(a) 44 (c) 48
(b) 46 (d) 50
- 35, 60, ?, 85, 89, 90
(a) 68 (c) 74
(b) 72 (d) 76
- 5, -8, 14, -23, 35, ?
(a) 47 (c) -47
(b) -50 (d) -35
- 20, 21, 30, 55, ?, 185
(a) 89 (c) 104
(b) 98 (d) 108
- 2, 3, 6, 18, 108, ?
(a) 324 (c) 1944
(b) 216 (d) 1296
- Shyam's age is $\frac{4}{7}$ of his age plus 21 years. His age is _____ years
(a) 28 (c) 42
(b) 35 (d) 49
- The value of $(895)^A$ is
(a) 810025 (c) 801125
(b) 801025 (d) 810125
- The expression $(10^{30}-1)$ is divisible by
(a) 9 (c) Neither 9 nor 11
(b) 11 (d) Both 9 & 11
- If 1 2 3 Y 5 6 7 8 9 0 3 2 is divisible by 24, Y must be
(a) 2 (c) 4
(b) 3 (d) 5
- The value of $\sqrt{26} - \sqrt{25}$ is nearly
(a) 0.101 (c) 0.089
(b) 0.110 (d) 0.099
- The number $(10^{37}+1)$ is divisible by
(a) 14 (c) 33
(b) 11 (d) 11 as well as 33
- Which of these is not a perfect

square?

- (a) 42025 (c) 3522
(b) 2916 (d) 6241

Directions: In questions 13-15 various faces of a cube are shown. Study them carefully and answer these questions:

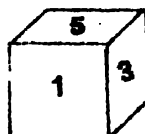
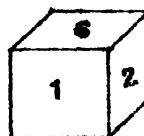
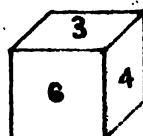


13. Which number is on the face opposite 4?

- (a) 6 (c) 3
(b) 5 (d) 1

14. The number opposite face 6 is

- (a) 1 (c) 4
(b) 3 (d) 5



15. The number opposite face 2 in the blocks shown above is

- (a) 1 (c) 4
(b) 3 (d) 6

16. The number opposite face 1 is

- (a) 2 (c) 4
(b) 3 (d) 6

17. If Dec 25, 1984 is Tuesday, Jan 1, 1984 was

- (a) Monday (c) Friday

- (b) Wednesday (d) Sunday
18. If Jan 31, 1978 was Tuesday, Feb 1, 1988 would fall on
(a) Monday (c) Thursday
(b) Friday (d) Saturday

19. If $2 \times 3 = 13$ and $3 \times 5 = 34$, 4×5 is equal to

- (a) 54 (c) 45
(b) 48 (d) 41

20. If GRASS is coded 63516, SIR will be coded (codes not necessarily in order)

- (a) 631 (c) 536
(b) 315 (d) 617

21. If LOW is coded 542 and WON is coded 458, LOAN will be coded.

- (a) 8245 (c) 8468
(b) 8241 (d) 8576

22. If RADIO is coded Wegkp, MEANT will be coded

- (a) Ridpv (c) Ricpu
(b) Ridqu (d) Ridpu

23. Which of the following is the greatest?

- (a) $\frac{5}{6}$ (c) $\frac{11}{12}$
(b) $\frac{8}{9}$ (d) $\frac{2}{3}$

24. Which of the following is the greatest?

- (a) 7^4 (c) $(.7)^{-4}$
(b) $(-7)^4$ (d) $(.07)^{-4}$

Directions: Spot the odd one out in the following questions:

25. (a) Rohini (c) Aryabhata
(b) Bhaskara (d) Apsara
26. (a) AB MN (c) TU VS
(b) YZ EF (d) HI KJ
27. (a) Lower (c) Liars
(b) Upper (d) Flask
28. (a) 37 (c) 29
(b) 71 (d) 89
(e) 63
29. (a) 100 (c) 10,000
(b) 1,000 (d) 10,00,000
30. If $A * B$ means $AB - \frac{A}{B}$, the value of $\frac{4}{3} * \frac{2}{3}$ is
(a) $\frac{11}{3}$ (c) 1
(b) $\frac{14}{3}$ (d) 0.24

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The world will soon witness the advent of a giant 140-metre-long airship, capable of carrying up to 250 people. The new Skyship-7000 is a development of the Skyship-500 and 800 craft that are already flying. The craft, now on the drawing board of Airship Industries (AI) of London, would get its buoyancy from some 70,000 cubic metres of non-inflammable gas stored in an envelope between 120 and 140 metres long.

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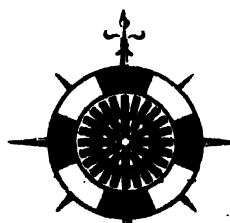
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1. (a) The difference between successive numbers are prime numbers. The next number should, therefore, be $31 + 13 = 44$.
2. (d) The difference between successive terms is $25 (=5^2)$, $16 (=4^2)$,.....
3. (b) The difference between successive terms (ignoring the sign) is 3,6,9,... and the terms are alternately positive and negative.
4. (c) The difference between successive terms is $1,9 (=3^2)$, $25 (=5^2)$,...
5. (c) The terms are products of two previous terms (starting from the third term).
6. (d) Let his age be x , then
 $4x/7 + 21 = x$
Thus, $3x/7 = 21$ or $x = 49$.
7. (b) $895^2 - 5^2 = (890)(900) = 801000$
Thus, $895^2 = 801025$
8. (d) $10^{30} - 1$ will consist of thirty 9's (999...99). It is thus divisible by both 9 and 11.
9. (a) Since $24 = 8 \times 3$, the number must be divisible by 8 as well as 3. To be divisible by 3, the sum of its digits ($46 + y$) must be divisible by 3. Thus $y = 2$.
10. (d) $\sqrt{26} - \sqrt{25} = \frac{26-25}{\sqrt{26} + \sqrt{25}} \approx \frac{1}{10}$. 0.099 is thus the only possible answer.
11. (b) $(10^{27} + 1)$ has $(10^3 + 1)$ as a factor which has $(10 + 1 = 11)$ as a factor since $10^{27} + 1 = 10,000,000,001$ it is not divisible by 3 and hence 33.
12. (c) A perfect square can never end in 2.
13. (d) Each number has four numbers as its neighbours and one number opposite it. From the first two cubes, the neighbours of 4 are seen to be 2,5,3 and 6. Therefore, the number opposite it will be 1.
14. (d) The neighbours of 6 are 3,4,1 and 2. Therefore, the number opposite it is 5.
15. (b) The neighbours of 3 are 4,6,1 and 5. Therefore 2 must be opposite 3.
16. (c) The neighbours of face 1 are 2,6,3 and 5.
17. (d) Jan 1, 1985 will be Tuesday. Since 1984 is a leap year, Jan 1, 1984 will be 2 days before Tuesday, viz. Sunday.
18. (a) Jan 31, 1988 would be $(10 + 2)$ days or 5 days after Tuesday, viz. Sunday. Therefore, Feb 1, 1988 would be Monday.
19. (d) $2 \times 3 = 2^2 + 3^2 = 13$... Thus
 $4 \times 5 = 4^2 + 5^2 = 41$.
20. (d) GRASS contains two S's and the code contains two 6's. Thus, 6 is the code for S. Since I does not occur in GRASS, the code for SIR should contain 6 and only one of other numbers occurring in the code for GRASS.
21. (b)
22. (d) The first letter (R) is replaced by the letter (w) which is fifth letter from R in the alphabet, the second letter (a) is replaced by fourth letter from it, etc.
23. (c) $\frac{1}{2} > 0.9$. All other numbers are less than this.
24. (a)
25. (d) All others are names of satellites.
26. (c) Each set consists of two groups of letters which are successive letters in the alphabet.
27. (d) The only word containing one vowel. All others contain two vowels.
28. (e) The only composite number.
29. (b) The only number which is not a perfect square.
30. (b) $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4} \times \frac{1}{2} = \frac{1}{8} = 1 - \frac{1}{8} = \frac{7}{8}$.

RAIN, RAIN GO AWAY



Dependence on rain gods for bumper harvests is fast diminishing—especially in Germany where the Perrot Company is busy developing ways of preventing famine, protecting the environment and revitalising barren soil. The underground sprinkler system designed by the company some 30 years ago has gone a long way in ensuring good crops. Crop yields resulting from the use of sprinkler system are much higher as compared to yields of non-sprinkled crops. So efficient is the sprinkler technology that it could well prove to be the key to solving the world's food problem.

ROBOTS HAVE COME TO STAY



Will man be a mere extra in the factory of the future while industrial robots glide past him soundlessly as passengers of unmanned vehicles, welders, processors, casters, cleaners—the main actors on a fully automated stage? To answer this question extensive research is being carried out at a German institute. Its findings: there will be a hierarchy of computers with only a few qualified human workers around. And if this is so then the world is at the threshold of the third industrial revolution—or perhaps evolution would be more appropriate?

NEWS CAPSULE

AWARDED

The UN Secretary-General's prestigious **Peace Medal** to internationally renowned Indian sculptor, Amar Nath Sehgal, in recognition of his works devoted to human understanding: The award came after Sehgal presented a work entitled *The Crushing Burden* to Javier Perez de Cuellar, depicting Mother Earth being crushed under the burden of burgeoning humanity.

The 16th annual **British Academy of Film and Television Art Awards** for best picture to: *The Killing Fields*, a David Puttnam-Roland Joffe film about Kampuchea's fall to Khmer Rouge in 1973; for best actor to: Haing S. Ngor for his role in the above film; for best actress to: Maggie Smith for her part in the comedy *A Private Function*. The leading television awards went to the India-set saga *The Jewel In The Crown*, which won best drama series-serial, best actress (Dame Peggy Ashcroft) and best actor (Tim Pigott-Smith) awards.

The **B.D. Goenka Awards** for 1984, instituted by the Indian Express group of newspapers, to: R.K. Keswani, a freelance journalist of Bhopal for his investigative pieces on the Union Carbide; to: Prem Bhatia, Editor of *The Tribune*, for his outstanding contribution to journalism. The awards carry a cash prize of Rs 1 lakh.

The **People's Union of Civil Liberties (PUCL)-India Today Journalism for Human Rights Award** to Shahnaz Anklesaria, environment correspondent of *The Statesman*.

At the 57th Academy Awards presentation, the **Oscar** for the best picture to: *Amadeus*; for best actor to: F. Murray Abraham for his performance in *Amadeus*; for best actress to: Sally Field for her role in *Places In The Heart*; for best supporting actor to: Haing S. Ngor for his role in *The Killing Fields*; for best supporting actress to: Dame Peggy Ashcroft for her role in *A Passage To India*; for best director to: Milos Forman for *Amadeus*; for the best screenplay writer to: Peter Shaffer for *Amadeus*; and for the best direction, costume design, sound and makeup to: *Amadeus*.

The **Directors Guild of America award** for the best director of 1984 to Milos Forman for his movie, *Amadeus*. Forman has previously directed such highly acclaimed films as *One Flew Over The Cuckoo's Nest*, *Hair* and *Regtime*.

Instituted by the University Grants Commission (UGC), the **C.V. Ramen Award** for research in physical sciences for 1981 to: S. Chandrasekhar of the Raman Research Institute, Bangalore; for 1982 to: Asima Chatterjee of Calcutta University; the **Meghnath Saha Award** for research in theoretical sciences for 1981 to: S.M. Alladdin of Osmania University; for 1982 to: R.P. Rastogi of Gorakhpur University; and the **J.C. Bose Award** for research in life sciences for 1981 to: M.A. Viswamitra of the Indian Institute of Science, Bangalore. Each award carries Rs 10,000 in cash.

The **World Health Organisation (WHO)**

Sasakawa health prize for 1985 jointly to the Society for Education, Welfare and Action (SEWA) of rural district Bheruch in Gujarat, Dr Jesum C. Azurim of the Philippines and Dr David Bersh Ecobar of Columbia. SEWA gets \$40,000 and the others share \$30,000 each. SEWA has been championing the cause of women and helping woman artisans make their work popular and profitable.

APPOINTED

Arjun Singh, CM of MP, as the Governor of Punjab, replacing K.T. Satarawalla, in a move seen as a broad political initiative to solve the Punjab problem. MPCC (I) chief, **Moti Lal Vora** was sworn in as CM of MP.

P. Venkatasubbaiah, former minister of state for home, as the Governor of Bihar, replacing A.R. Kidwai; **Mohammad Usman Arif**, former deputy minister for works and housing, as the Governor of UP, replacing C.P.N. Singh.

Jean-Bernard Merimee, French ambassador to Australia, as France's new envoy to India, replacing Serge Boidevaix who returned to Paris following allegations of a French link in the espionage scandal.

VISITED

Milka Planinc Yugoslav PM on Mar 18 on a day's stopover on her return home after a tour of south Asian countries. Mrs Planinc met PM Rajiv Gandhi for nearly two hours and discussed bilateral relations, specially ways to expand economic cooperation between the two countries.

Siddhi Savetsila, Thailand's foreign minister, on Mar 21, on an official visit during which he met PM Rajiv Gandhi, President Zail Singh and the chairman of the policy planning committee of the external affairs ministry, G. Parthasarathy. During Siddhi's visit India and Thailand agreed to work closely in multilateral forums, and discussed the South East Asian situation, disarmament and the Gulf war, among others.

Sam Nujoma, the president of the South-West African People's Organisation (SWAPO), on Mar 25, for talks with Indian leaders on the Namibian question. Nujoma appraised Indian officials of South Africa's efforts to destabilise frontline states which had pledged support to SWAPO.

SCIENCE

New Hearts for old: An artificial heart that can automatically control the flow of blood and has features that prevent formation of blood clots, has been designed by researchers at the Pennsylvania State University. The air-driven device, which is an improvement on the Jarvik-7 model, will serve to keep a patient alive until a donor heart can be found. It is a self-contained electrical unit.

Research related to the Antarctica, deep sea mining and ocean thermal energy conversion (OTEC) will be the major preoccupa-

tion of the department of ocean development during 1985-86. Out of the Rs 28.90 crores and Rs 21 crores allotted to the department for plan and non-plan expenditures, it will spend nine crore rupees on India's fifth expedition to the frozen continent. A provision has been made for acquiring underwater technology, and detailed surveys for polymetallic nodules in the central Indian Ocean will be continued. Incidentally, the fourth expedition to the Antarctica returned home on Mar 25 after a three-and-a-half month stay on the icy-continent. The 12 members of the third expedition who had manned 'Dakshin Gangotri' for 15 months have also returned.

'Hydrophobic Silicate'—a new material that picks up oil like a sponge and forms a sludge that can be skimmed off, has been developed by scientists at the Defence Science Centre. Its potential use as an agent to combat oil spills in the sea is, therefore, a distinct possibility. Being heavier than most synthetic absorbents, the silicate sponge will require less storage space and can be air-dropped over oil spills.

Relief for crippled knees: Arthritis victims have something to look forward to now that a new experimental therapy to slow down or temporarily halt the often relentless destruction caused by rheumatoid arthritis, has been developed by researchers at the Harvard Medical School. The therapy, which involves injecting of short-lived radioactive material into crippled knees, is safe because the material decays in a day and its radiation affects only the cells it is intended to kill. Healthy lining of the knee joint eventually grows back and patients start to feel improvement in three months.

Among the most powerful galaxies in the universe are the six distant galaxies, radiating energy of upto five trillion suns, US astronomers have revealed in a study—the first in which scientists have calculated the tremendous energy emitted by them, mostly in the form of invisible and infra-red light. The six galaxies upto three billion light years away from the earth, are 100 to 500 times as powerful as the Milky Way.

India's first indigenous satellite will be launched into orbit by the advanced satellite launch vehicle later this year, the department of space indicated in its demands for grants presented to Parliament on Mar 17. The satellite will be launched under the stretched Rohini satellite series project undertaken by ISRO for designing and fabricating a series of small and low cost satellites. It will provide a satellite platform for conducting technological, and scientific experiments.

Electromagnetic waves from trees: An ISRO scientist has successfully tapped trees in his backyard for electricity and lit a light-emitting diode (LED) for three hours, and a torch bulb intermittently, opening up many possibilities in the renewable energy field. Dr Shiv Prasad Kosta embarked on his experiment in 1979, using green vegetation canopy as a radio frequency (RF) antenna. He successfully conducted experiments on a live cypress plant and freshly cut date palms. His experiments

revealed that certain geometrically-shaped vegetation can, due to its water and chlorophyll content, and dynamic, complex and dielectric properties, sustain, propagate and radiate electromagnetic waves from its structure. In other words, trees and other selected vegetation can be used as media in microwave contact. The Bangalore police is using his technique to combat crime. In 1984 Kosta thought of tapping electricity from trees, and the success of his experiments in that direction may find application in the electronics industry. Other possible uses: to reactivate low capacity cells, cure plant diseases, indicate a tree's health, and perhaps brighten up rural huts.

EDUCATION

Medical council takes initiative: The medical council of India has urged the government to amend the Central and state acts to invest it with more power for maintaining the standards of medical education. According to the council, the mushrooming of private medical colleges in the country has resulted in a decline in the standards. The council has also recommended to the Centre an amendment of the Medical Council Act to make registration of medical practitioners with the council obligatory. Also, it has been suggested that a screening test be held for foreign qualified doctors before they were allowed to practise in India. On its own, the council is making arrangements to enable practitioners to continue their education and update their knowledge, and setting up a committee to study the problems of Indian medical students abroad.

The new education budget shows a 14.5% rise at Rs 514 crores, against Rs 449 crores during 1984-85. One new feature is the government's commitment to make education for girls free all over the country from classes nine to twelve. A sum of Rs 8 crores has been reserved for it. Though a substantial Rs 6.65 crores is to be spent on INSAT cells and assistance to specialised institutions a mere trickle of Rs 2 lakhs and Rs 80,000 under two heads has been allotted for computer education in schools. A sum of Rs 19 lakhs has been set aside for promotion of yoga. There is no mention of the open university in the budget.

Asia-Pacific regional cooperation in Education: Vice-chancellors of universities in the Asia-Pacific region on Mar 20 concluded a conference in New Delhi, expressing the opinion that the first step to encourage regional cooperation should be to recognise each other's degrees. They also agreed to initiate joint projects and have teacher exchange programmes between their universities. The delegates also discussed a proposal to formulate a common syllabus, alternatives in higher education, student indiscipline and ways to curb it. They resolved to set up a permanent secretariat of Asian and Pacific universities and till this was done, requested India to look after the secretariat work.

DEFENCE

India's naval defence is being shored up in the wake of reports of introduction of sophisticated and nuclear weaponry in the Indian Ocean region. Plans for increased recon-

naissance by aircraft, introduction of superior submarines, more surface-to-surface missiles and improved electronic warfare capabilities, have been finalised.

NATO's guarded endorsement of 'star wars' at a meeting of its defence ministers at Luxembourg on Mar 27, is in tune with its misgivings about the feasibility of the project. The wording of the communique issued at the end of the two-day meeting, indicated scepticism; the ministers were careful to stress that they only supported the research part of the \$26 b project.

Enhancing Pakistan's defence capability continues to be a major preoccupation of the US. On Mar 27, the US defence department announced that the US will sell Pakistan 15 radar units estimated at \$65m and designed to pinpoint enemy mortar fire. On Mar 29, the sale of 500 air-to-air Sidewinder, AIM-9L missiles, valued at \$50m was announced.

The defence budget for 1985-86 has shown an increase of Rs 511 crores: the Rs 7,686-crore outlay represents 15% of the country's budget. In 1984-85, it was estimated that Rs 6,800 crores will be spent on defence but the figure was later revised to Rs 7,175 crores. The army receives Rs 4,702 crores, an increase of Rs 500 crores, the navy Rs 602 crores, an increase of Rs 100 crores, and the air force Rs 1,730 crores, about Rs. 241 crores higher than its outlay for the current year.

HEALTH

Guinea worm threat: Over 12m people are at the risk of guinea worm infestation in seven states in the country, according to a survey of the UN development programme (UNDP). The states: Andhra Pradesh, Gujarat, Karnataka, MP, Maharashtra, Rajasthan and Tamil Nadu. Rajasthan is the most seriously affected state with 14,905 people from 6,104 villages found to be infected. Besides India, the survey says the disease afflicts an estimated 20m, people in sub-Saharan northeastern Africa, the Arabian peninsula, Iraq and Pakistan. Guinea worm infestation, transmitted entirely by drinking water, can be painful, and even causes disability from painful ulcers and abscesses which last four to six weeks. The appearance of the worm at the surface is preceded by slight fever, blisters on the skin, nausea, vomiting, diarrhoea, asthma, giddiness and fainting spells.

WHO's ambitious plans: The World Health Organisation (WHO) has decided to assign a major role to nurses in its primary health care programme and supply essential drugs to the developing countries at the lowest possible cost to help reach the goal of health for all by 2000. It also plans to increase its 1986-87 budget outlay by 6.52% to \$54m. The budget proposal, recommended by the 75th WHO session in Geneva recently, is to be approved by the world health assembly in May.

NEIGHBOURS

The 'forbidden city' no longer forbidden: Nepal and China have agreed to open up Lhasa, the capital of Tibet, to western tourists through an overland route from Nepal. Western tourists visiting Nepal will be able to travel for

two days by road to Lhasa through authorised travel agents. The Chinese have also opened some border areas along the Nepal-Tibet border for trekking. Incidentally, China and Nepal have initiated a memorandum to open the Tibet-Nepal border to tourists. Tourist agencies from both Nepal and China will be allowed to organise cross-border trips after the memorandum is officially approved by Beijing and Kathmandu.

ECONOMY-National

ESCAP survey: Though India has been successful in making adjustments to external payments constraints in recent years, it will not be easy to ensure that success in the coming years, says the UN Economic and Social Commission for Asia and the Pacific (ESCAP). In its 1984 survey, ESCAP mentions two reasons for the pessimism: an anticipated decrease in India's crude oil production and the shift in the structure of external financing away from long-term concessional flows towards medium-term non-concessional flows. The survey says that India's successful external adjustments thus far have been greatly helped by its ability to increase domestic crude oil production in the past five years. Though oil production may continue to increase, its rate of growth is expected to be much lower, the survey says. The survey has cautioned that the capacities of the developing countries for adjustments have become "overstrained." Also, restrictions to the free flow of world trade continue, real interest rates in world capital markets remain high, and sluggishness in the demand for primary commodities persists, the survey pointed out.

World Bank assistance: The World Bank has announced loans totalling \$798m to be applied to power, irrigation and coal mining projects in India. Among them is a 20-year credit of \$200m for the construction of the Sardar Sarovar dam, drainage and power projects on the Narmada river. In addition, two 50-year interest-free loans of \$200m and \$150m are being provided for the canal and aqueduct construction, road and rail bridges by the DA. The Indian state governments and other local sources will cover the remainder of the \$2.5b cost.

New tea marketing policy: The Centre has announced its new tea marketing policy for 1985, envisaging a production of 655m kg. The export target is fixed at 220m kg, and the domestic consumption target at 435m kg. To ensure even phasing of exports, the government has set quarterly export targets. Export targets in the first and second quarter of the year have been fixed at 40m kg each. During the third quarter, when the bulk of the production reaches the market, the target is 80m kg and in the fourth quarter, 60m kg. The US Agency for International Development (USAID) has requested \$179m for India as economic assistance during fiscal 1986. In comparison, Pakistan is entitled to get 675 m dollars during the year as economic and military aid. USAID has sought a total of \$1.096b for aid to South Asia.

FICCI-China council agreement: The Federation of Indian Chambers of Commerce and Industry (FICCI) and the China council for promotion of international trade on Mar 2

signed an agreement to develop and expand trade relations. The agreement came during a visit to New Delhi by an 8-member Chinese business delegation. The two sides identified specific items for import and export. Items India could export include consumer goods, raw materials, computer software, scientific instruments and engineering and transport equipment. China, in its turn, could supply India with edible oils, drugs, jute machinery and chemicals.

India's trade deficit during the first nine months of 1984-85 stood at Rs 3,99.9 crores against Rs 3,558.2 crores during the same period in the previous year. While exports went up by 18.8% to Rs 8,146.2 crores, imports registered an increase of 12.8% to Rs 11,746.1 crores.

India to buy US polysilicon technology: The government on Mar 14 announced its decision to buy polysilicon technology from a US firm, Hemlock, after a careful assessment of the "techno-economic viability and cost-effectiveness of the indigenously-developed process". However, in order to give the indigenous effort a chance to prove itself, the investment decision on the public sector national silicon facility has been postponed by a year. PM Rajiv Gandhi announced in Parliament on Mar 14. The agreement to buy technology from Hemlock had been approved by the government earlier but following criticism of the deal by several departments and scientists, the PM ordered a review of the decision. The agreement provides for the supply of process knowhow, basic engineering and proprietary equipment for the production of polysilicon.

ECONOMY-International

Global trade grew in volume by 9% in 1984, nearly double the rise in world output, taking the total of world exports to an all-time high, according to the general agreement on tariffs and trade (GATT). Exports totalled \$1,995b, an increase of 6.5%. The increase is attributed to the continued appreciation of the US dollar whose real effective exchange rate was 6.0% above that of 1983. Developing countries increased their export earnings by 7.5%. Japan became the world's largest exporter of manufactured goods, edging West Germany from the position. GATT said the growth in world trade reflected the strong recovery and 7% growth in GDP of the US, but cautioned against complacency. Tensions over trade issues are still being felt, it said, and called on industrial countries to liberalise their trade policies to facilitate a return to healthy economic growth.

Bank loans to developing countries are on the decline again, according to the IMF's latest analysis. Bank lending to non-oil developing countries totalled \$22b during the year ended September 1984, compared with \$36b in the year before. Mexico's debt crisis of 1982, followed by a similar crisis in Brazil and Argentina, has made bankers wary, the IMF says. The new drop comes after a period when low living standards were further declining in Latin America and Africa. It is also expected to hit hard countries that got used to fast growth in the 1960s and 1970s.

An IMF study of government finances shows that total outlays—expenditures and

lending minus repayments—are outpacing overall economic growth. In industrial countries, the combined outlays of all levels of government topped 45% of gross domestic product in 1982, an increase of four percentage points since 1979. For non-oil developing countries, total government outlays reached 31.5% of the GDP, compared with 27% in 1974. There have been increases as well in tax revenues and deficit financing. The industrial world's tax ratio rose to 34% of GDP in 1982 and average deficits to 5.3%. The figures for the non-oil developing countries were 20.2% and 5.7%. The expenditure on arms reached a global average of 4% in 1982, and spending on social security and welfare 37.9% in industrial countries and 5.2% in the non-oil developing countries.

Total external debts of developing countries reached nearly \$900b at the end of 1984 and it is projected to reach \$970b by 1985-end, according to the latest edition of world debt tables. The growth of debt was far less than the estimated nominal increase in the GDP and World Bank officials see that as a healthy sign. During 1984, about \$7b more was paid by 104 countries to service their debts, than they received by way of long-term disbursements. Among countries with no debt problems at all were India and China which followed conservative policies and kept their debt service ratio low.

Rich grow richer, poor poorer: While the US, Japan and the Arab oil countries and Western Europe grew steadily richer in the last decade, the average person in 30 poor countries of Africa and Latin America grew ever poorer, according to a World Bank study. The US was second to Switzerland in average income, the American earning \$14,090 to the Swiss's \$16,390. Outside the oil countries, the closest averages to the US were Norway (\$13,820) and Sweden (\$12,400). The average in some of the smaller oil countries in the Gulf was the UAE \$21,340, Qatar \$21,170, Brunei \$21,140 and Kuwait \$18,180. These, however, are special cases in which the averages are not very meaningful since much of the wealth goes in the hands of the government. Most of the poor countries that showed decline in their already low living standards were in Africa and Latin America, with Chad

and Nicaragua heading the list there. Detailed information shows Bangladesh is the poorest country, with an average per capita income of \$130 a year, followed by Nepal with \$170. Both Bangladesh and Nepal are, however, improving their standards, despite constraints, the World Bank says.

OAU to take stock of African economics: The Organisation of African Unity (OAU) foreign ministers on Mar 4 ended a week-long meeting in Addis Ababa, paving the way for a major review of the continent's faltering economies, the first in five years. The members agreed to hold a summit meeting in the Ethiopian capital from Jul 18 to 21, which will attempt to find remedies to falling food output, stagnant economic growth and the recurrent nightmare of widespread hunger because of drought. It will be the first time that the OAU has devoted a heads of state session to economic matters since a summit meeting in the Nigerian capital of Lagos in 1980 drew up a blueprint for co-ordinated economic development through Africa, now a distant dream.

STATES

High technology electronics city in Haryana: The Haryana state electronics development corporation plans to set up a high-technology electronics city in Gurgaon, about 20 km from New Delhi, to attract non-resident Indians to set up industrial units for exports. The city will have centralised computer services, centralised standby power sources, and satellite communication. There would be 200 units in all. Being close to the capital, units in the belt would have easy liaison with the central government and other departments. The corporation is basically a promotional organisation unlike other state electronics corporations engaged in direct commercial project.

Modernisation of Assam's police force: The Assam government is initiating a Rs 5-crore scheme to modernise the police force in the state in view of political developments in the northeastern region, according to the home department. The police will have a computer for maintaining crime records to providing speedy assistance to law enforcement agencies. Along with the crime information system, computerisation of several other systems, including personnel, traffic inventory and accounts, is on the cards.

Left front charter of demands: The Chairman of West Bengal's left front, Saroj Mukherjee on Mar 17 announced an eight-point charter of "urgent demands" of the people of the state and called upon the front cadres to launch campaigns to support the demands. He also announced a series of programmes to mobilise people's support for the demands. The demands broadly aim at the revival of industry in the state by opening the closed units and nursing the sick ones back to health, nationalisation of the jute industry, setting up of more industries in Bengal, incorporation of the right to work in the fundamental rights, allowance to the unemployed, improvements in the education system, round-the-year work for landless labourers, among other things. The series of programmes announced by Mukherjee included an all-Bengal strike by students, sit-in strikes at railway stations and a march to

BALLOONS AND BABIES

A tiny balloon pump has now been devised to assist babies' hearts while healing after open-heart surgery. This inter-aortic balloon pump, inserted into the main artery next to the baby's heart, works in time with the heart to open and close off the aorta. When the ventricle pumps, the balloon deflates, thus allowing blood to pass into the body. And when the ventricle is at rest, a console outside the body pumps gas through a catheter causing the balloon to inflate which closes off the aorta so blood can't run back into the heart. For an infant this balloon needs only 21-22 cubic centimetres of gas but has to work much faster. Such inter-aortic devices are successfully being used in adults since 1971 but have been introduced for babies only now—modified to be small enough and fast enough for them.

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J & K government proposes to set up a 1.25-crore mountaineering institute at Pahalgam for long-term promotion of tourism in the state. It will also add 400 new skiing equipment at Gulmarg to give a fillip to tourism, the state's major revenue-earner. The de-restriction of some more areas in Leh-Ladakh is also expected to enlarge the scope for attracting the foreign tourist. More trekking areas in the valley have been identified, and a ski and trekking hire shop set up at Srinagar. Last year, tourism suffered its worst slump in recent times, with domestic arrivals slumping to an all-time low of 225,000 from the 1982 peak of 642,000.

EVENTS—National

Nuclear power station in Karnataka: The Union Cabinet has approved the location of a nuclear power station in Karnataka. Two units of 235 mw each will be built at Kaiga on the banks of the Kali river, close to the Kadra dam under construction in Dharwar. In addition, the government has also approved the installation of two more units of 235 mw at the existing atomic power station at Rawabhatta in Rajasthan.

Major Indo-US deal on technology transfer: India and the US on Mar 9 concluded a major deal on the transfer of high technology to India. The agreement, signed in Washington, also includes American technology parks to be set up in India to facilitate easy transfer of technology, and the so-called super computers. The signing of the deal is seen as a softening of the US stand; earlier, the US had refused to transfer super computer technology to India, fearing that the technology would be put to military use or diverted to the Soviet bloc.

EVENTS—International

UN lambasts USSR: A UN draft report accuses the Soviet Union of carrying out a deliberate policy of bombing villages in Afghanistan and killing civilians. In terms unusually strong for the UN, the report blamed the Soviet presence for the flight of four million refugees from Afghanistan and the serious food shortages in that land-locked state. It charged Moscow with almost total disregard for the Geneva concessions offered to prisoners of war, saying captured guerillas were routinely executed. Torture was so common that, in effect, it had become an administrative practice, the report said. The Babrak Karmal regime, it said, was holding 50,000 political prisoners.

Belgian soil for nuclear weapons: The Belgian Parliament on Mar 20 approved the government's controversial decision to deploy 48 nuclear-tipped US cruise missiles on Belgian soil. The 116-93 vote with one abstention on a confidence motion, followed a 15-hour debate a week after PM Wilfred Martens announced the government's decision to accept the missiles. Within hours of Martens' announcement, the first 16 missiles arrived and were deployed at Florennes.

Britain gets tougher on Asians: The British Government on Mar 26 announced immigration restrictions virtually banning overseas doc-

uments and visa-free entry for doctors working in Britain. The curbs will affect mostly doctors from India and Pakistan and dentists from Australia. About 2,000 doctors and 200 dentists go to the UK every year.

MISCELLANY

Most populous cities in the future: Four Indian cities—Bombay, Madras, Calcutta and Delhi—will be among the world's most populous metropolitan cities by the year 2000, according to the Economic and Social Commission for Asia and the Pacific (ESCAP). Eleven other Asian cities will also reach the status of megacities by that year: Shanghai, Tokyo, Beijing, Jakarta, Seoul, Karachi, Teheran, Osaka-Kobe, Dhaka, Manila and Bangkok. The survey warns that the "deterioration in conditions of life and the burden of providing amenities will be major problems for governments of the region." Population growth and migration of rural peoples to the urban areas were the factors mainly responsible for the rise in the number of city-dwellers. Urban population grew by 23.4% in 1978 and rose to 26.4% in 1980-83.

New York takes the cake: New York's subway has the highest crime rate in the world, while Japan and the Soviet Union have systems that are virtually crime-free, says an Associated Press survey. Even in Paris, where the French are considering calling in the army to control subway crime, the subway crime rate falls short of New York's 14,000 felonies a year, with 4,101 felonies reported in 1984. The survey says New York subway's antique design, full of nooks, pillars, long corridors, is more hospitable to criminals than the newer subways of cities such as Washington, which are designed for clear sightliness, television monitoring, and safety. The survey, which covered four continents, found that some subway systems, such as in Japan, are almost crime-free because of small size, limited times of operation, heavily middle-class ridership and new designs that make them easier to patrol.

DIED

Tom Adams, 53, the Prime Minister of Barbados and one of the English-speaking Caribbean's most prominent leaders on Mar 11 at Bridgetown of unspecified causes. Adams, elected premier in 1976 and re-elected in 1981, took the lead in forming an eastern Caribbean security alliance with smaller states and after a bloody military takeover of Grenada in October 1983, helped coordinate talks that led the US-led invasion of Grenada on Oct 25, 1983.

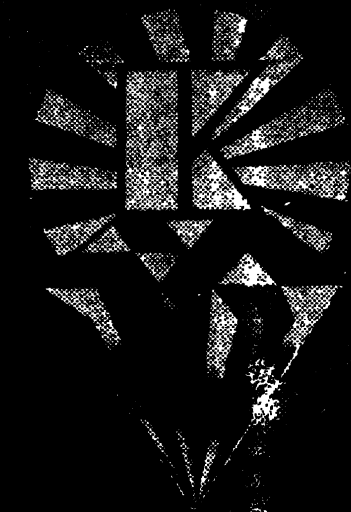
Des G Phadkar, 59, one of India's finest post-war cricketers, on Mar 17 in Madras after unsuccessful open heart surgery. Phadkar had been a national selector.

V.A. Syed Mohammed, 61, former minister of state for law and former Indian high commissioner to Britain, on Feb 28 at New Delhi's AIIMS, after a brief illness.

Henry Cabot Lodge, 82, a former Republican vice-presidential candidate and a diplomat closely connected with the Vietnam war, on Feb 28 at his Beverly (US) home after a long illness.

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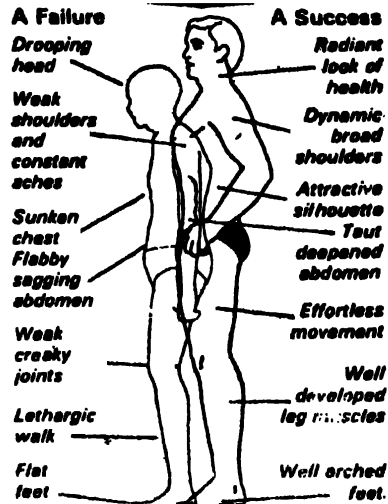
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(Continued from page 20)

What Zia wants is that the President, and not the Parliament should choose the prime minister. The Cabinet will merely "aid and advice" him, and he will be able to dissolve the Parliament at will. He will be the arbiter of powers under the Constitution and his decision will be irrevocable. The President has also written into the Constitution the so-called judgement of the December referendum, according to which he has been given five more years in office. The amended Constitution will come into force when martial law ends, but Zia has not yet specified as to how long that will take.

Later in the month, he assumed the mantle of an elected President with martial law still in force. He also appointed Mohammad Khan Junejo from the sensitive province of Sind as Pakistan's new Prime Minister. Junejo won a vote of confidence in the National Assembly and soon afterwards declared that all political leaders living in exile abroad were welcome to return. The 11-party Opposition, the Movement for Restoration of Democracy (MRD), however, ruled out any dialogue with Junejo, on the grounds that their leaders and workers were still detained by the government and that no talks could be held in their absence, or under duress.

AFGHANISTAN

DEFENDING ATROCITIES

A report, ordered by the UN's Human Rights Commission, has come in for a lot of flak from the Afghans. The author of the report is Prof Felix Ermacora, an Austrian with a non-partisan record. He was responsible for a damning report on Chile in 1974 and took part in a UN enquiry on human rights in South Africa. His present report on Afghanistan is second-hand because the Afghan government did not reply to his request asking permission to enter the country. He interviewed refugees in Pakistan, France and America and talked to humanitarian organisations working with refugees and came to the conclusion that 'foreign' (he does not name the Soviet Union) troops were

responsible for the mass murder of thousands of people. He said that the bombardment of villages was part of a deliberate policy to deprive guerrillas of support and food and that torture had become an administrative policy. He claimed that about 50,000 people are presently being held as political prisoners.

The Afghan delegate in the Human Rights Commission denounced the report as a "pre-fabrication of the factories of American imperialism" and claimed that Prof Ermacora was a CIA agent. However, the commission accepted the report and voted 31 to 7, with five abstentions, for the withdrawal of foreign troops from Afghanistan. The Russians have, so far, ignored the report. But if the Human Rights Commission decides to send the report to the General Assembly, and if the latter accepts it, the Russians will have to defend themselves publicly.

GREECE

SHUTTLING BETWEEN EXTREMITIES

Greece's unpredictable PM, Andreas Papandreou has done it again. He first declared that he had decided to back the conservative President, Constantine Caramanlis. This upset members of his Pan Hellenic Socialist Movement (Pasok) as well as the main communist party (KKE). Shortly afterwards, however, Papandreou reversed his stand and announced that he would back the left-leaning alternative to Caramanlis, Christos Sartzetakis, a Supreme Court judge, who gained notoriety as the prosecutor in a case involving the murder of a leftist politician 22 years ago.

Caramanlis resigned, throwing Greece into a new political turmoil. The question is, did Papandreou dump Caramanlis for reasons of political expediency or does this mean that Greece is tilting further to the left? Papandreou's adverse stand on US defence installations in Greece, his refusal to cooperate militarily with the other NATO allies and his frequent praise for the Soviet Union have already aroused American suspicions. Washington feels that Greek politics is moving definitely to the left. With this in mind, the Americans have recently begun to implement contingency plans to move the four US naval and air bases out of Greece.

S.B. & J.S.

UTILITY OF MAPS-1

(Continued from page 19)

and retain such information which is relevant and useful to our purpose, at a given time.

Map Tracing

Essential drawing tools in map tracing are (i) Drawing instrument sets with dividers, compasses—both ink and pencil, protractors, ruling pens; (ii) T-square triangles and celluloid set squares; (iii) Graduated scales and sliding rules; (iv) Drawing material including paper, pencil, eraser, ink, colour, brush, reproduction whites, sticking tape, pins; and (v) UNO stencils or Le Roy pens, particularly for lettering.

While drawing a map the selection and depiction of the scale is very important. There are three ways in which the scale is depicted on the map: (a) By a statement such as '2 inches to the mile' or '1/2 mile to the inch', (b) by a graphic scale; and (c) by a Representative Fraction. R.F. = $\frac{\text{Map distance}}{\text{Ground distance}}$

(Suppose the scale is 2 inches to the mile then 2 inches = 1 mile or 2 inches = 63,360 inches because 1 mile = 63,360 inches and therefore R.F. = $\frac{1}{31,680}$ or 1:31,680.

Now, to draw a map, carefully read the data supplied and make a mental note of the main features in their proper position. Then make a rough sketch and write the

names of these features in the right place. Keeping in mind the extent of the country to be shown draw the border of the map after selecting a convenient scale. After drawing the lowest and highest contour lines insert rivers and the major features, the means of communication and cultural settlements. Then check the sketch and see that all the features required in the data are shown, and there is nothing of an impossible nature (like a river flowing uphill) inserted. The features not required in the data should not be inserted. Another point to be kept in mind is that the contour lines must either form closed chains or run to the edge of the map. Also, the map should neither be crowded by contours to obscure other features nor should the contours be too few in number. Now ink the map showing the contours in red or brown and using conventional signs for various features, label the other necessary features. Finally, draw the border, scale, show the north and give a key to all the symbols used through a legend, and also write the name of the map below.

Weather Maps

For drawing weather maps, atmospheric pressure, temperature, humidity, condition of the sky and various other aspects are constantly monitored through various scientific instruments and then the data is compiled. This data is used to draw weather maps. The various symbols used for drawing weather maps

are shown in Box II.

Distribution maps are useful for studying the variation in value, amount or density of stocks, crops, minerals, industries, voting trends and of population. But the limitations with such maps is that a map based on one year's figures cannot give us a true picture, for there are variations from season to season and year to year. Three methods are used to show crops, stocks, minerals, etc on distribution maps:

Layer tint or shading method: This is useful for showing density or average figures per unit area. In order to draw such maps, distribution is shown by different types of black and white shading or different tints of colours. In the map given below the net area shown as percentage of total area has been depicted in various shades (see Map A).

Dot method: The purpose of the dot maps is to give a unit number for absolute figures. A unit number, say 5000 or 1 lakh according to density and scale of the map is represented by one dot. By this method the wasteland may also be avoided (see Map B).

Writing the name of the commodity: The name of the item is printed in capital letters or in rectangles across the area where that commodity or item is produced. The method being qualitative does not give any quantitative idea of the item in question (see Map C).

(To be continued)

SPORTS

ATHLETICS

At the USA-Mobil Indoor Athletics meet in New York on Feb 22, two American women sprinters set world indoor bests, twice each. Triple Olympic gold medallist Valerie Brisco Hookey set a world best in the heats of the 200 m at 23.08 sec and then smashed it in the final to clock 22.95 sec. In the 400 m Dianne Dixon clocked 52.77 sec in the heats and 52.20 sec in the final to set world bests.

Britain's Todd Bennett set a new world Indoor best in the 400 m for men, on Mar 3 at the 16th Indoor European Championships in Athens, clocking 46.56 sec. Marita Koch set the track ablaze in the 200 m for women, as the East German girl clocked 22.82 sec to set a world best, despite a recent injury. (For indoor meets, the world records are called world bests—as the tracks can differ, vastly from each other and be of various lengths for a lap and at different angles for banking).

At the World Cross-Country Championships, held in Lisbon on Mar 24, Olympic marathon champion Carlos Lopes of Portugal won the men's event for the third time. The women's event was won by Zola Budd, the controversial little girl from South Africa, who runs for Britain.

BADMINTON

At the 49th National Championships which were held at the Indraprastha Indoor Stadium in New Delhi in early March, it was encouraging to see a youngster topple the established veteran in the women's singles final. The men's championship, however, went true to form. Results:

Men: Singles: Syed Modi (Rlys) b Vimal Kumar (Ker) 18-17, 15-8. Doubles: Leroy D'sa and Sanat Mishra (Rlys) b Uday Pawar and Pradeep Gandhe (Mah) 15-13, 15-8.

Women: Singles: Madhumita Bisht (Rlys) b Arni Ghia (Mah) 11-6, 2-11, 11-4. Doubles: Ami and Deepti Thanekar (Mah) b Madhumita and Ameeta Kulkarni Modi (Rlys) 15-9, 15-7. Mixed Doubles: Gandhe and Ami (Mah) b D'sa and Madhumita (Rlys) 15-12, 18-13.

Since Prakash Padukone stopped participating in the Nationals, Modi has always won the singles crown and this was his fifth straight title.

Morten Frost Hansen won his native Danish Open Championships for the fifth time, at Copenhagen on Mar 10, with a 15-4, 15-5 win over Sung Han Kook of South Korea. Second-seeded Prakash was eliminated in the third round by a young Chinese Xiang Guobao 11-15, 15-12, 15-7.

The All-England Championships concluded in London on Mar 24 with China's Zhao Jian-Hua creating a major upset on his very first attempt when he claimed the men's singles title by defeating defending champion Hansen 6-15, 15-10, 18-15. The 20-year-old Chinese became the first player to win the title on debut, since Rudy Hartono of Indonesia clinched the first of his eight singles titles in

Chinese Women's singles final, as second seed Han Aiping dethroned the reigning champion and top seed, Li Lihg Wei 11-7, 12-10.

CHESS

India's number one chess player Pravin Thipsay was declared joint champion of the Commonwealth Championships which ended in London on Feb 27. With this victory he also received the first norm of the grandmaster title. He now requires a second norm to become the first Grandmaster from India. Thipsay, a 25-year-old bank employee, was national champion in 1982.

CRICKET

The Indian woman cricketers are not far behind their male counterparts in setting world records. The Indian captain Diana Eduljee has claimed more than 100 wickets which is a world record.

Wills XI coasted to a comfortable six-wicket victory over holders Board President's XI to lift the **Wills Trophy** in the Limited Overs Tournament in Bombay on Mar 17.

The **Sheffield Shield** (i.e., the national championship of Australia, equivalent to our

when they defeated Queensland in the final ended on Mar 19, by a narrow one-wicket margin.

The three-Test series between India and New Zealand women's cricket teams ended in a draw as all the matches were indecisive.

FOOTBALL

The National Championship for the **Santosh Trophy** was won by Punjab, as they thrashed Maharashtra 3-0 in the final at the Green Park Stadium in Kanpur on Mar 23.

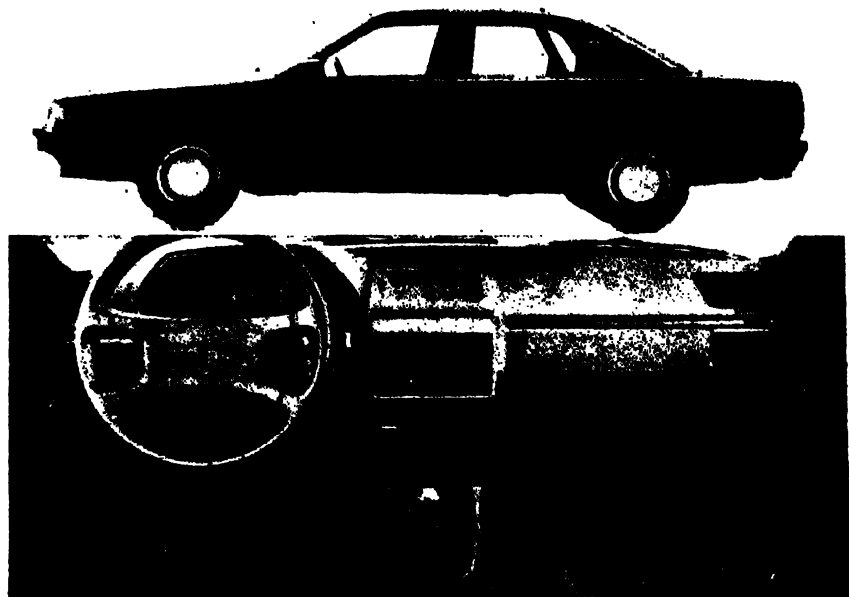
SQUASH

The French Open Championship in Paris was won for the fourth time in a row, on Mar 16, by world champion Jahangir Khan of Pakistan, who was absolutely devastating. In an incredibly fast game, he disposed of New Zealand's Stuart Davenport in just 27 minutes—which must rank as one of the quickest wins in an international final—winning 9-0, 9-1, 9-1.

TENNIS

In the first round match of the world group

MADE FOR EACH OTHER



On the night of Mar 10, the final of the World Championship of Cricket was played in Melbourne, Australia. Two dynamic packages shot into prominence. Ravi Shastri—the Champion of Champions; Audi-100—the prize car he received. A sleek, ultra-modern, jet-setting car, Audi-100 is just the stuff for champs.

The only car in the world designed to reduce wind resistance to the minimum, Audi-100 has the lowest drag coefficient and an extremely economical petrol consumption of 58 km per gallon at a speed of 120 km per hour. The comforts of the driver and passengers are not, however, overlooked. A plush air-conditioned carpeted interior complements the super-sleek rust-proof exterior. Apart from this the car is highly automated. The windows are electrically operated and the steering wheel power operated. Why, even the driver's seat is microprocessor controlled to adjust itself to a driver of any height! To top it all the Audi-100 has a computerised spokesman too! As soon as the engine is switched on, an electronic gadget immediately examines the various mechanisms to check whether these are in working order. If they aren't, the car tells you so! The Audi-100 is system-tested for speed, comfort, and total reliability. It is, in fact, made to last!

Calcutta on Mar 10. In the opening match Ramesh Krishnan defeated Francesco Cancellotti 6-3, 11-9, 4-6, 3-6, 6-4. Then Vijay Amritraj was given a tough fight by Claudio Panatta. Vijay managed to scrape through 6-1, 6-4, 5-7, 3-6, 6-3. But the young Italians were not going to give in easily. Their doubles pair of Claudio Panatta and Gianni Occhipinti blasted off Anand Amritraj and Shashi Menon 6-3, 6-3, 11-7. But, on the final day, Vijay got the better of Cancellotti 5-7, 6-4, 6-3, 8-6 to give India the winning 3-1 lead.

Krishnan lost the inconsequential last match to Panatta 6-8, 6-4, 6-1.

India thus stay in the world group (consisting of 16 nations) and will meet the winners of the Sweden vs Chile match in the quarter-finals.

S.G.

ROTHMANS

AN AFFAIR TO REMEMBER

THIS time when India clinched the Rothmans Trophy at Sharjah it was no bolt from the blue. It was an expected victory earned through dint of sheer hard work, excellent team work and fielding par excellence. And thus winning the fourth international one-day championship in succession—the previous ones being the Prudential Cup, the Asia Cup, and the Benson and Hedges World Championship of Cricket, the Indian team richly deserves the widespread accolade it is receiving. Once the underdogs, the Indians now reign supreme in the willow world.

On Mar 22 in the first match of the four-nation Rothmans Tournament, Pakistan suffered a convincing defeat at India's hands. In an extremely low-scoring match, India was initially bundled out for a paltry 125, thanks to a devastating pace attack by none other than the mighty Imran who pocketed six wickets for only 14 runs—indeed a stupendous bowling performance. But the Indians fought back with a vengeance, bowling the opponents out for an unbelievable 87 runs. As an Australian fan later joked, India would have bowled Pakistan out for less than 50 runs had it made 85. Which speaks volumes for the calibre of the team.

Australia beat England in another hard fought match and made it to the finals too. So on Mar 29, the stage at Sharjah was once again all set for what promised to be a gripping final. The Aussies walked into the match with nothing to lose while the Indians walked in under pressure to prove to the world that they were champs all the way. And prove it they did. Although Australia did not hand the match over to them on a platter. After skittling Australia out for 139 runs, India went in to bat and almost dropped the match at one stage with the scoreboard showing 120 for 7. With the world champs still needing 20 runs to win, Mohinder Amarnath and Madan Lal demonstrated some superb rearguard action steering India out of troubled waters safely. India won the Rothmans Trophy and the \$45,000 that went with it. Ex-captain Sunil Gavaskar was declared Man of the Series, essentially for his outstanding fielding performance. So, yet again, Indian cricketers have romped back home quite indisputably invincible.

J.S

THE WHIZZ KID

THE 'wonder boy' of Indian cricket. That is how Mohammed Azharuddin is hailed all over the cricketing world. But little was known about this batting sensation from Hyderabad till that fateful moment when he made his Test debut in Calcutta against England. With a century on debut, Azhar was able to make his presence felt on the Indian cricket horizon. But his deeds in the next two Tests in Madras and Kanpur made him a celebrity. This 22-year-old Hyderabad youngster had hit a century in each of his first three Tests. Something even the great Don Bradman had not achieved. Overnight, Azhar became the toast of the country. So much so that if you go to Hyderabad now, literally any rickshawala or auto driver would be able to take you to his house. It has become as much a tourists' attraction as the famed Salarjung Museum.

However, Azhar's march to fame has been a hard one. His middle-class family background had always taught him to be a fighter and grab the chances that came his way. His entry to Ranji Trophy is just two years old. He was aware that his inclusion in the Indian team depended on Sandeep Patil's failure. I remember, when I brought it to his notice during the Bombay Test, he was quick to say, "Nakko baba, don't say that. Sandeep is a great player." But ironically Azhar made his debut following Patil's exclusion after the Delhi Test debacle. And rest is history. Azhar hammered consecutive centuries—110 at Calcutta, 105 at Madras and 122 at Kanpur to enter his name in the record books.

He continued in the same form for the World Championship of Cricket in Australia where the critics were delighted with his style and grace. Not to mention his strokes. His remarkable ability to play the ball late was compared to the great West Indian Sir Frank Worrell by BBC commentator Christopher Martin Jenkins, who is considered an authority on cricket. After Sunil Gavaskar, this youngster has superbly taken over the mantle of creating records with fine timing. As the legend faded in the series against England, Azhar emerged as the 'messiah' of Indian cricket.

In Hyderabad, Azhar was just one of those cricketers who make it quick to the Ranji Trophy level and stagnate. Examples like Shahid Akbar and Arshad Ayub being the most recent. But Azhar was a class apart. His teacher at All Saints High School, Rector Brother Joseph was the first to notice Azhar's talents. "He never missed his practice and was very particular about his dress. It used to be spotless white", he recalls. But the greatest encouragement Azhar got was from his uncle Mir Zhanulabiddin, a good league cricketer in his day, and his grandfather. Azhar always used to watch his uncle's match. His grandfather would prefer to watch Azhar's batting far away from the crowd. He would never accept an invitation to watch it from the pavilion. "The boy would feel nervous", he felt. For Azhar, it was the greatest misfortune that his grandfather never watched him make his Test debut. He died about a month before Azhar played at Calcutta.

In the beginning, Azhar was a leg-spinner but later switched onto medium-pace. It was much later that he realised his batting potential.



Azhar's first big break came in 1977 as a 10th class student when he played for South Zone Schools against English Schools and got a pleasing 42. From his first cricket match till the Kanpur Test, Azhar has maintained a copy where he himself writes his scores and the manner in which he got out.

Azhar was never good at studies but he didn't neglect them either. His day would begin with a 'namaaz' at 5 a.m. followed by jogging and exercises. After school, he practised from 3 to 6. Study in the evening and to bed before 9. He graduated from Nizam College.

Azhar is the eldest of four brothers—Farsuddin, Balizuddin and Iteqaruddin, and two sisters—Lubna Aziz and Amina Aziz. He is highly religious too. He would keep *roza* even while playing matches in his school and college days. Now he finds it difficult. Azhar's penchant for big scores is not a recent development. On his debut in Duleep Trophy, he hammered 226 against Central Zone at Dhanbad last year missing Ajit Wadekar's record by three runs. A year before, he had slammed 245 against West Zone in the Vizzy Trophy at Mohan Nagar and missed Gavaskar's record by two runs. A brilliant 153 against England in the Ahmedabad and 121 and 109 against Andhra in the Ranji Trophy paved the way for his Test entry and he has not looked back since.

Basically, Azhar is an on-the-rise player. He has all the strokes and can play them with authority against spinners and fast bowlers alike. The pick of his strokes being the whipping on-drive he executes with all the grace of a Greg Chappell and the late cut he plays a la G.R. Viswanath. The most important factor of Azhar's batting is his ability to play the ball at the last moment and his abhorrence to play the strokes in the air. It is one reason he refrains from playing the hook. His brilliant fielding is another plus point. His greatest asset, his modesty and willingness to learn all the time. Azhar is a very soft-spoken person. At times it is difficult to hear him even from very close. It has been a great start for one who watched his first ever Test only after he was selected to play in Bombay. Though he didn't make his debut there, he watched every ball of the match like any youngster would do while at his first Test.

VJAY

PERSONALITY DEVELOPMENT

WRITING A RESUME-1

A good resumé should mirror your individuality, and convince the employer about your suitability for the post advertised. A two-part serial on how to write an effective resumé.

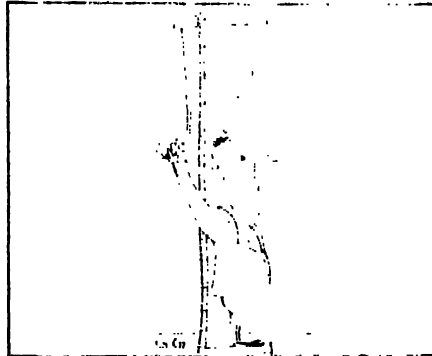
Selling one's services in the job market is as tough and tricky as the promotion of consumer goods is for the salesman. However, if the latter popularises his products through gimmicky commercial ads, how does the job-seeker present his capabilities to the potential employers? Well, the answer lies in the preparation of an effective resumé which is very close to designing a 'self ad copy'. For, what's the good of all your knowledge and competence if you cannot put them across, straight, to the employer?

Writing a good resumé, which is usually accompanied by an application letter, is an art. A well-developed resumé must introduce you to the employer, arrest his attention, arouse his interest in your potential abilities and convince him that you are the person to interview and perhaps employ. Hence, this preliminary communication with the employer must be to the point and written in such a manner that it presents straight facts, with a promotional approach.

Know Yourself

The process of resumé writing can be systematised by broadly analysing your interests and assessing your plus and minus points. Knowing your accomplishments in the academic sphere and your attitudes towards people, of a certain kind, is essential to career planning. Hence, you must go through an exercise in self-analysis.

An honest self-analysis may have its roots in one's school days. A recollection of your high school experiences, extra curricular activities, voluntary help offered and part time jobs taken up can help you assess the nature of the job you would like to choose. Your self-evaluation must also include the type of work you can do best (relating to data, people, objects etc.), your capacity to express through words or writings, the extent to which you can stretch your patience, your ability to work under pressure, leadership qualities, the



extent to which you can be flexible to changing situations.

This invaluable information about yourself would help in preparing a crisp, complete resumé which would, in fact, help the prospective employer in quickly deciding whether you are cut out for the kind of job he is offering. On the other hand, you would also be holding the key to the vital aspect of every career of one's choice, viz. 'job satisfaction'.

The Content

Resumé writing cannot be based on a set format. For, every job seeker wants to stand out, above his competitors. Nevertheless, certain accepted rules are followed universally. They can be said to constitute the five W's and the five C's of resumé writing. The W's, which outline your educational qualifications and employment experience, your interests and aims should have clear answers to questions like

- Who are you?
- What do you know?
- What have you done so far?
- What would you like to do?

What can you do for the employer? The resumé, in order to satisfy the five 'C's, must be

Clean: Neatly typed or handwritten (if the employer so indicates in his advertisement), easy to read, free of spelling and grammatical errors.

Clear: Well divided into separate paragraphs, each highlighting your qualifications, work experience, aims and other information. It must provide ready information to the employer who is skimming through your resumé along with a hundred others.

Compact: Limited to one or two pages, brief, to the point and written in phrases rather than in prose, with complete sentences.

Correct: Indicate exact academic record,

give a correct picture of the period of work experience, salary drawn etc.

Complete: Contain every relevant information relating to education, work experience, exposure to jobs of various types (part time commissioned jobs) even if not, widely divergent.

In general a resumé has to be polished and provide an in-depth picture of yourself. Depending on your career objectives you may slant your resumé elaborating on all the relevant work experiences and condensing those not directly related to the particular job you are applying for. Hence, it is better not to send out carbon copies of one's resumé. Every resumé must be suitably modified to suit varied job requirements. But, your resumé should be original and concise, so as to mirror your individuality.

Guidelines

Your approach to resumé writing depends on your background. But, two broad approaches to resumé writing can be underlined: the biographical approach and the functional approach.

The biographical resumé is the style suitable for most of the fresh graduates who are entering the employment market. The format of the biographical resumé is based on a summary of relevant information written in a chronological order within the following framework

- (a) Job objectives: Explain the type of job you wish to do indicating your skills, abilities and background. If you are interested in a broad occupational field, it should be stated clearly.
- (b) Education: Emphasise the positive aspects of your academic career and extra-curricular activities. Describe any academic honors or financial rewards you have received; also indicate any positions you have assumed in school/college.
- (c) Work experience: Describe the specific responsibilities or tasks you have undertaken, including civic services or voluntary social work rendered. Periods of self-employment, if any, should also be indicated.
- (d) Hobbies and interests. These may be included to highlight other aspects of your personality.
- (e) Personal data: Any information about sex, race, age and marital status should be specified.
- (f) References: Furnish the names, addresses and designations of persons holding recognised positions, provided they have known you and have acknowledged your capabilities. Names of relatives should not be mentioned. Make sure that you have the permission of the

(Continued on page 60)

Economy

GENERAL BUDGET '85-86

A LESS-TAXING PROPOSITION

The Union Budget should not be a money-gathering exercise. It should be planned keeping in view the long-term projections of the economic policy. It is also not correct to think that the Budget is the major instrument to shift the common man from the poverty area to the non-poverty area. The problem of poverty is complex and has to be handled by various programmes for improving productivity in the economy.

The Budget is based on the presumption that the net tax revenue cannot be increased by raising tax rates. In fact, this has been the thinking for many years. Y.B. Chavan was the first Finance Minister who took the bold step of reducing income tax rates. There was a 38% increase in the revenue from income tax. The next Finance Minister Subramaniam also reduced tax rates. However, the tax revenue did not increase. It was realised that this was due to the raising of the exemption limit. Pranab Mukherjee also took a risk and brought down the maximum rate of taxation to 61% and there was a steep rise in tax revenues. V.P. Singh has further reduced the maximum tax limit and it is hoped that the tax revenues would go up further. Therefore, experience has shown that lower rates provide more incentive to honest tax payers to pay their taxes. However, we have to develop a culture of tax payment because in India a large number of persons have developed a culture of non-tax payment—they would not pay tax under any circumstances.

The strong point of the Budget is the way it seeks to handle black money, which is earned in three ways:

- from activities which are illegal—bribes and smuggling,
- from selling a product at a price which is illegal. This happens when items of controlled prices are sold at higher prices;
- from tax evasion. There cannot be any fourth way to earn black money.

The earlier finance ministers only made efforts to mop up the black money. Steps taken by them like bearer bonds and voluntary disclosures, were aimed at reducing the quantity of black money. This did not prove to be of much help because black money and white money move in two streams which cross each other at several points. Since efforts were not made to check the origin of black money, the steps taken by the finance ministers did not produce the desired results.

This is a summary of a lecture delivered recently by Prof A.M. Khuroo at Hindu College, University of Delhi. It was sponsored by CCTimes.

V.P. Singh has taken steps to stop the generation of black money. He is the first one to do so. Since donations to political parties have now been legalised, there would be no need for them to earn money illegally. Secondly, 25 industries have been delicensed. Licensing of industries was another source of black money because bribes had to be given at several points for getting licences. Thirdly, the MRTP limit has been raised and there would be no need to earn money and not show it. And lastly, the reduction of the maximum limit to a reasonable rate of 50% would be a very strong incentive to pay tax.

The Budget also explains the need for economies of skill which is the real solution to the economic problems in poor countries. It is a strange contradiction that commodities produced in villages, like handloom shirts and handmade chappals, cannot be sold in villages. They are either exported or bought by the elite. However plastic chappals made in factories on a large scale are needed and sold in rural areas. Budgets in the years to come will have to tackle this strange phenomenon.

The Budget is also an effort to switch over from petrol to other sources of energy which can be old and non-conventional. The tax on petrol, though harsh on certain sections of the society, would force people to reduce the use of petroleum products.

The Budget, however, has not done much for people earning less than Rs 1,500 p.m. They were not paying taxes previously and, therefore, they are not affected by the recent tax exemption limit or the reduction of rates. In fact, the increase in petrol gas prices would affect them adversely.

The Budget has also not done anything about the generation of black money in the real estate sector. In fact, this sector is the largest creator of black money and the main culprit is the capital gains tax which motivates people to show purchases at low prices. In fact, if the capital gains tax is removed or changed in such a way that earnings from rural society, if invested in the interests of the economy, are exempted from tax, the generation of black money would be reduced considerably.

references to furnish their names.

The functional resume is one which goes beyond the outline of education and experience. It enables you to focus on your transferable skills in certain jobs where your aptitude and talent can be creatively utilised irrespective of your educational and technical qualifications. For eg. you can work for an editorial office or in a publicity organisation if you are creative and have the ability to convert thoughts into beautiful words. It is not necessary that you should be a qualified journalist, though it may be an added qualification. Similarly a person who has a business acumen may be ideally suited for salesmanship without the necessary qualifications.

The functional resume is invaluable for people with considerable work experience or with little work experience and considerable non-paid experience if: (a) they wish to change fields, (b) they want to work in fields not directly related to their education and (c) they are liberal arts graduates and have to bridge the gap between generalised education and specific job requirements.

A key element of the functional resume is your section on skills eg. managing and organising skills, human relations and interpersonal skills research and analysis skills communications skills. You are expected to pick or design 'skill clusters' that best describe how you can be useful to the employer.

In a functional resume, you must single out your experiences and place them in a 'skill cluster' e.g., administrative and management skills, staff supervision directed programmes and organised efforts) This format allows you to draw from life's experiences and not just from paid jobs. Now, the fact that you spoke publicly, designed ads, and negotiated conflicts will transfer easily to other work situations.

Covering Note

Every resume should be sent along with a covering letter which may be warm, personalised but strictly businesslike in its approach in introducing you to the employer. Commonly called an application letter, the covering letter should be:

*Typed neatly on paper.

*Addressed to a specific person, by name and title.

*Conveying to the employer how you got to know him and why you are interested in working for him.

*Telling the employer what you can offer, not what you anticipate from his organisation.

*Reflecting your individuality.

(Look out for some samples in our next issue)

P.G.

INDIA & THE 21st CENTURY

BY JYOTSNA SHARMA

"While the 16th century belonged to the Spanish, the 17th to the Dutch, the 18th to the French, the 19th to the British and the 20th to the American—the 21st century belongs to India," quipped Prof A.M. Khusro. With an optimistic forecast like that, what more can India possibly desire?

Twentieth century India has made phenomenal progress, practically in every sphere of activity, ranging from travel to gadgetry," claimed Prof Khusro, former member of the Planning Commission. He was speaking at the seminar on 'India and the 21st Century', organised by the TRF Institute for Social Sciences Research and Education, at the India International Centre, New Delhi, on Mar 21. The participants included several eminent scholars and heads of educational and other institutions.

According to Samir Jain, Joint Managing Director, Bennett, Coleman & Co Ltd, the seminar was designed as a "brainstorming exercise aimed at providing several clear alternative scenarios and action plans on the key fronts, if not a blueprint on what the Indian scenario would be at the advent of the 21st century".

Presiding over the session on Economy, Prof Khusro felt that "as far as the pace of change was concerned it would be difficult for the 21st century to match the 20th". However, he struck an optimistic note when he claimed that the 21st century would witness the advent of a new economic, social and developmental era punctuated by rapid growth in these fields. And, with technical changes moving ahead of social change, science and technology will reach the common masses and facilitate their growth.

In his keynote address, P.L. Tandon, Chairman, National Council of Applied Economic Research, underscored the need for better interaction between the various levels of public and political leadership in order to ensure India's entry into the next century with an accelerated pace of growth and development". These levels of leadership included political, administrative, academic, managerial and defence leadership. Tandon also stressed the need for "quick decision-making" now that India stood on the threshold of the 21st century.

Socio-political Set-up

Analysing the political and social set-up

in the country, Prof C.P. Bhambri, Dean, School of Social Sciences, JNU, highlighted the prominent role of politics in countering the negative trends operating in the country. But, the influence of caste and religion, Bhambri opined, were hampering India's progress. These elements tend to make politics passive and subservient to pressures and demands, he said.

The management of 'politics for change' in the 21st century will also be restricted by the lack of comprehension of the linkage between internal and external forces. This has been made explicitly clear by the Punjab problem, where certain external forces and pressure groups have been instrumental in creating tension in the country, the seminar reiterated.

Prof Sushila Kaushik, Professor of Political Science, University of Delhi; however, foresaw the possibility of revivalism in Indian politics, owing to the growth of the middle class. "This will be coupled with a demand for decentralisation of politics and will subsequently lead to emergence of more regional parties. And national parties, in the coming years, will have to aim low and not be ambitious," she said.

Economy

Several economists taking part in the seminar focussed on the role of the private sector in India. The private sector was expected to become more significant than the public sector; and the inexorable process of urbanisation, which was leading to industrialisation, was discussed. B.M. Nigam, Professor of Commerce Delhi University, held that once the benefits of industrialisation effectively reached the masses, India may well become a power to reckon with.

Referring to the rapidly uplifting growth curve and the lowering population curve, Prof Khusro claimed that these were healthy signs, as they were accompanied by an increasing per capita income. According to Dr K.N. Kabra of the Indian Institute of Public Administration, effective employment opportunities to the tune of 36,000 per day will have to be created to provide the population of the 21st century with increased purchasing power. The seminar stressed the need for according top priority to population control, education—especially primary and secondary, health and other vital issues of national importance. According to Nigam, while the rate of population growth in China had come down from 2.4% per

annum to 1.2% per annum, that of India remained stagnant at 2.1% per annum. At this rate India would be the most populous country in the world in the 21st century, with all its attendant problems, he said.

Education

Prof M.V. Mathur, Member, Pay Commission, while presiding over the session which focussed on education, emphasised the necessity of good teachers. For, teachers were ultimately responsible for moulding the character of students. Prof Mathur called for rigorous testing before teachers were chosen and, thereafter, training and orientation of those selected, before they were finally allowed to teach.

The Director of the Bharatiya Vidya Bhavan, Dr M.P. Chhaya, also underlined the imperative need for good teachers while emphasising the vital role of education in the upliftment of a country.

Science And Technology

The session on science and technology was chaired by Prof Dinesh Mohan, former director of the Central Building Research Institute, Roorkee. Prof Mohan believed that non-conventional energy sources, though not a commercial success at the moment, were bound to find wider use in future. He was of the opinion that as a result of the initiative taken by the PM, progress in the areas of computer technology and electronics, in the coming years, would be rapid. Innovation, he felt was the need of the hour and, for this, change in the attitude of the government was essential. Massive efforts should be made for the extension and development of new technology, he suggested.

Sweeping aside all claims on the status of India in the field of science and technology, Dr Dinesh Mohan, IIT, Delhi, disputed the claim that India had the third largest scientific manpower in the world. Mohan spoke vehemently about the need to impart knowledge to students in Indian languages as against English, which he believed, was not comprehensible to at least 90% of the students.

S. Arunachalam of the Publications and Information Directorate, CSIR, was of the opinion that basic research should be emphasised as no technology could develop without a firm foundation of basic research; scientific establishments in India had failed to function up to their expectation because only their institutional framework was copied from the West, while the content remained indigenous. Also, referring to the existing disparity between the economic status of scientists and that of professionals in other fields, he recommended that only by granting better social status to scientists would India march into the 21st century with the confidence of a scientifically progressed nation.

CAREER NEWS

ASSISTANT'S GRADE EXAM

Never mind if you aren't the initiating type. You could still be a good assistant to start with. So why not try your luck in the UPSC Assistant's Grade Exam, on the basis of which recruitment will be made for a number of vacancies in the Assistant's Grade of the Railway Board Secretariat Service, Central Secretariat Service, Armed Forces Headquarters, etc.

But take care you are at least 20 years in age, with a degree from any recognised university. If yes, you may fill in the application form, published in the *Indian Express* and in *Employment News*, dated Apr 6, 1985, in accordance with the specifications provided therein.

The completed application form, addressed to the Secretary, UPSC, Dholpur House, New Delhi-110 001, should be submitted on or before May 20, 1985, along with a fee of Rs 28 (Rs 7 for SC & ST candidates), through crossed IPO, payable to the Secretary, UPSC, at the New Delhi GPO, or crossed bank draft from any branch of the SBI, payable to the Secretary, UPSC, at the SBI Main Branch, New Delhi.

RBI OFFICERS

Unless you have some reservations about being a bank officer, you may compete for the exam for the recruitment of Grade 'B' officers in the RBI.

Before May 8, 1985, you should have qualified for (i) a master's degree with at least 58% marks, or (ii) a doctorate degree with a second class master's degree or

accountant with a bachelor's degree, or (iv) a postgraduate diploma in management institute of repute like IIM, with a bachelor's degree. If you are an SC/ST candidate possess a master's degree with minimum pass marks or any equivalent recognised qualification, you can still try your hand. But you must be between 21-28 years in age as on Apr 1, 1985, for taking the exam. For format of application you may look up *The Hindustan Times* dated Apr 10, 1985.

Completed application forms are expected to be submitted to The Secretary Reserve Bank Of India Services Board Hong Kong Bank Building, 6th Floor Mahatma Gandhi Road, PO No. 10009 Hutatma Chowk, Bombay-400 023, on or before May 8, 1985, along with a fee of Rs 40 (Rs 12 for SC/ST candidates) in the form of crossed IPO only, payable at GPO, Bombay, in favour of RBI.

GIC OFFICERS

Your career is insured if you choose to take up a job with the General Insurance Corporation of India.

Make sure you have an accounting background, i.e., (i) a degree in Commerce from a recognised university with Accounts and/or Audit as special subjects or (ii) qualified the intermediate exam for chartered accountants or cost accountants. But you cannot be below 21 years and not above 26 years, as on Mar 1, 1985, in order to apply for the post. Selection will be based on a written exam which will be held at various centres, all over India. For format of application and other details you will have

Apr 12, 1985.

Completed forms, accompanied by a crossed IPO for Rs 40, drawn in favour of General Insurance Corporation of India, payable at GPO, Bombay, should be forwarded to The Adviser, Post Bag No. 2281, Chanakyapuri PO, New Delhi-110 021, latest by May 6, 1985.

POST-DOCTORAL FELLOWSHIPS

Matsumae International Foundation, Tokyo, Japan, invites applications from Indian nationals residing in India for the award of Doctoral/Post-Doctoral research fellowships in (a) Computer Sciences, (b) Electronics (solid state) and (c) Conversion of Coal (carbonisation).

You stand a good chance of bagging the fellowship—(1) if you are below 40 years as on Oct 1, 1985 (relaxable upto two years for SC/ST candidates), (2) if you possess a doctoral degree equivalent to a Japanese doctoral degree with 60% marks or above at master's degree level in the subject concerned or related field or 60% marks or above at master's degree level in the subject concerned or related field and at least two years research experience as on Oct 1, 1985.

Find yourself a sponsor and you may be given preference. Take all the time you need, but apply latest by Jul 31, 1985, to Tulsi Ram, Section Officer (E.S-III Section), Room No. 516-B-Wing, Ministry of Education, Shastri Bhavan, New Delhi-110 001. For details see *Employment News* of Mar 2.

Answers to

TEST YOUR WORD POWER

- abyss:** B: very deep pit or gulf; hole so deep as to appear bottomless. Embattled as it is, the European auto industry is not staring into a uniformly bleak abyss.
- animosity:** C: hostility; strong dislike or active enmity. Israel's pullback in southern Lebanon is aggravating the animosities stirred up by nearly three years of occupation.
- baffle:** A: to puzzle; confuse; bewilder; perplex. Jeane Kirkpatrick is all of those things that at once baffle and fascinate Ronald Reagan—a woman, an academic and a Democrat.
- barter:** D: act of exchanging one thing for another. While barter can be an inefficient and cumbersome form of trading, it is a natural solution for countries with serious cash-flow problems like debt-laden Brazil and Nigeria.
- dwindle:** A: to become less or smaller by degrees; decline. European trade union leaders are watching helplessly as their membership rolls dwindle and their political clout withers.
- etiquette:** B: conventional code of good manners; rules for formal relations or behaviour among people. The young worker of Brazil learns the etiquette of farm work at a tender age.
- fret:** A: to worry. Health experts in China fret that the under-six crowd is so well-fed that for the first time, China is facing a rash of juvenile obesity.
- futile:** B: useless; without results. More often than not, the search for peace in the Middle East seems almost as futile as looking for a needle in a haystack.
- genocide:** C: the extermination of an entire race by mass murder. Traumatized by the genocide unleashed by the army, thousands of terrified Tamils have abandoned their homes and fled Sri Lanka.
- heretic:** C: one holding opinions contrary to established doctrines of his religion, political party, profession, etc. History is replete with instances of revolutionary thinkers being put to death, condemned as heretics.
- irrelevant:** B: not related to the subject or topic. The very basis of

secularism is that a person's religious faith is irrelevant.

- lucrative:** B: profitable. With an eye on the lucrative fees that may lie ahead, lawyers suing Union Carbide on behalf of thousands of Indians killed and injured in the Bhopal gas leak are jockeying for position.
- maelstrom:** D: a whirlpool or any turbulent, dangerous and irresistible force; a restless, disordered or tumultuous state of affairs. A cruel civil war has converted Sri Lanka from a soothing Shangri-La on the Indian Ocean to a maelstrom of violence.
- reprieve:** C: respite, temporary relief; suspension of execution. Serious amateur astronomers who are weary of staying awake all night to record their observations may soon have a reprieve in the form of a new telescope that gathers data electronically.
- savour:** A: to enjoy or taste with pleasure. Unlike the Falklands war, the miners' strike has left British PM Margaret Thatcher with little reason to savour her moment of triumph.
- secede:** A: to withdraw from membership of a state, federation, organisation, etc. The Labour Party of Britain splintered in 1981 when most of the leading moderates seceded to form the Social Democratic Party.
- supplement:** A: to make additions to. Most Mexican drug agents earn less than \$400 a month, and the temptation to supplement their salaries with bribes is enormous.
- tangible:** C: that can be perceptible by touch; definite and clear; concrete; real. Reputation, of all human possessions, is perhaps the least tangible yet the most zealously guarded.
- vie:** A: to compete with; rival; contend. With profits running into billions of dollars, the cocaine lords vie with Third World governments in wealth and power.
- vilify:** A: to abuse, slander; say evil things about. In our overpopulated country where opportunities to excel have traditionally been limited, achievers of success have often been vilified.

Vocabulary Ratings:

20-18 correct	exceptional
17-15 correct	excellent
14-12 correct	good

GK.GK.GK.GK.GK.GK.GK.GK.GK.GK.

The **Planning Commission** was constituted by a Government of India Resolution on Mar 15, 1950, to outline and give direction to India's Plan effort. However, it was as far back as 1938 that the first step in this direction was taken when a National Planning Committee was set up with Pandit Jawaharlal Nehru as its Chairman. The committee discussed certain basic issues and also appointed 29 sub-committees to study and report on different sectors of the economy and on certain special problems relating to national planning.

World War II disrupted the work of the committee, though some of the sub-committees did submit their reports by 1945. However, it was only after independence that serious thought could be given to creating a system of planning in India. So, in 1950, the Planning Commission was born.

The functions of the commission are:

- to assess the country's material, capital and human resources and investigate possibilities of augmenting the resources that fall short of its requirements;
- to formulate a plan for the most effective and balanced utilisation of the country's resources;
- to define the stages of the plan's execution and propose allocation of resources for each stage;
- to identify factors responsible for retarding economic development and determine conditions to be established for the successful execution of the plan;
- to determine the nature of machinery required for each stage in all its aspects;
- to periodically appraise the progress in the execution of each stage and recommend policy adjustments and measures that such appraisal may show to be necessary;
- to make such interim or ancillary recommendations considered by it to be appropriate for facilitating the discharge of its duties or, on a consideration of the prevailing economic conditions, current policies, measures and development programmes, or on an examination of such

Governors & Chief Ministers		
State	Governor	Chief Minister
Andhra Pradesh	Dr Shankar Dayal Sharma	N.T. Rama Rao
Assam	Bhisham Narain Singh	Hiteshwar Saikia
Bihar	P. Venkata Subbiah	Bindeshwari Dube
Gujarat	B.K. Nehru	Madhav Sinh Solanki
Haryana	S.M.H. Burney	Bhajan Lal
Himachal	Hokesheswara	Vir Bhadra Singh
J&K	Jag Mohan	G.M. Shah
Karnataka	A.N. Banerji	R.K. Hegde
Kerala	P. Ramachandran	K. Karunakaran
Maharashtra	Air Marshal (Rtd) I.H. Latif	Vasant Dada Patil
Madhya Pradesh	M.M. Chandy	Moti Lal Vora
Manipur	Gen (Rtd) K.V. Krishna Rao	Reishing Keishing
Meghalaya	Bhisham Narain Singh	Capt William Sangsangama
Nagaland	Gen (Rtd) K.V. Krishna Rao	S.C. Zameer
Orissa	B.D. Pande	J.B. Patnaik
Punjab	Arjun Singh	Under President's Rule
Rajasthan	Air Marshal (Rtd) O.P. Mehra	Hari Deo Joshi
Sikkim	K. Prabhakar Rao	N.B. Bhandari
Tamil Nadu	S.L. Khurana	M.G. Ramachandran
Tripura	Gen (Rtd) K.V. Krishna Rao	Nripen Chakraborty
Uttar Pradesh	Mohd. Usman Arif	N.D. Tiwari
West Bengal	Uma Shankar Dikshit	Jyoti Basu
Some VIP Indians		
Chief of the Air Staff	—	Air Chief Marshal L.M. Katre
Chief of the Naval Staff	—	Admiral R.H. Tahliani
Chief of the Army Staff	—	Gen A.S. Vaidya
Chief Justice of India	—	Y.V. Chandrachud
Attorney General	—	K. Parasaran
Comptroller Auditor General	—	Gian Prakash
Chairman UPSC	—	H.K.L. Kapur (Capoor)

Union Territories

1. Andaman & Nicobar Islands	Manohar Lal Kampani Lt Governor
2. Arunachal Pradesh	T.V. Rajeshwar, Lt Governor Gegong Apang, Chief Minister
3. Chandigarh	K. Banarji, Chief Commissioner
4. Dadra and Nagar Haveli	Dr Gopal Singh Administrator.
5. Delhi	M.M.K. Wali Lt Governor
6. Goa, Daman and Diu	Dr Gopal Singh Lt Governor Pratapsing Raoji Rane Chief Minister
7. Lakshadweep	Omresh Saigal, Administrator
8. Mizoram	Hari Shankar Dubey, Lt Governor Lalthanhawla, Chief Minister
9. Pondicherry	Tribhuvan Prasad Tewary, Lt Governor M.O.H. Farook, Chief Minister

specific problems as may be referred to it for advice by Centre or State.

The commission is presided over by the PM who is also minister for planning. It has a deputy chairman. There is also a minister of state for planning. The commission has eminent economists and experts in various fields as full-time members.

After the December '84 general elections, the Planning Commission was reconstituted in January '85. The members of the reconstituted Planning Commission are—Chairman: Rajiv Gandhi; Dy Chairman: Dr Manmohan Singh. Members: P.V. Narasimha Rao, Minister of Defence; Vishwanath Pratap Singh Minister of Finance; Prof M.G.K. Menon; Dr C.H. Hanumantha Rao; Dr Raja J. Chelliah; Hiten Bhaya; Abid Hussain.

It was as early as 1867 that oil was discovered in India in the remote north-eastern state of Assam. However, the country's **oil production** was negligible till as late as 1955 when a Directorate of Oil and Natural Gas was created. In 1956, it was converted into a commission and is now known as Oil and Natural Gas Commission (ONGC). Since then, oil production in India has advanced steadily. The ONGC's sphere of activity, which includes exploratory survey, drilling operation and production of crude oil and gas and other ancillary services, extend all over India except the north-eastern states.

Assam and Gujarat are the two main onshore oil fields of the country while Bombay High is the major offshore oil field. Oil was found in Ankleshwar, Gujarat, in 1960 and at Bombay High in 1974.

The country has at present 12 oil refineries. Before independence it had only one at Dighbri. The refineries are at Dighbri (Assam), Bongaigaon (Assam), Nunarnati (Assam), Haldi (West Bengal), Barauni (Bihar), Visakhapatnam (Andhra Pradesh), Madras (Tamil Nadu), Cochin (Kerala), Trombay (Maharashtra), Koyali (Gujarat) and Mathura (UP). Trombay has two oil refineries while the Mathura refinery was commissioned in 1983. Koyali in Gujarat is the biggest refinery in the country. Two more sites—Karnal (Haryana) and Mangalore (Karnataka) have been selected for oil refineries.

The total production of crude during the years 1982-83 and 1983-84 was 21.06m and 26.02m tonnes respectively. The target of production for 1984-85 has been fixed at 29.63m tonnes. At present, India is producing 66% of its requirement of oil.

The USSR is the only country which is collaborating with India in oil exploration activities. Eight contracts have been finalised during 1980-84 under various Indo-Soviet protocols for geo-scientific surveys and drilling for exploration of crude oil and gas.

Oil and gas have been found at the following places during April December '84:

Place	Oil/Gas
Onshore	
Dahej-Gujarat	Oil
Chargmaigaon-Assam	Oil
Rokhia-Tripura	Gas
Kaikalur-Andhra Pradesh	Gas
Offshore West Coast	
B-148	Oil
kdi	Oil

S.K.

BETTER ENGLISH

UNDERSTANDING COMPREHENSION-3

BY RAGHU BHATNAGAR & RAJUL BHARGAVA

In this concluding part, we are giving some sample passages, which include the multiple-choice type and the short-answer type. Tackle these on the lines discussed in the preceding issues, and you should have no problems.

Read the passages and answer the questions that follow:

1 New York is a city of many beauties, and with a reckless prodigality she had done her best to obscure them all. Driven by a vain love of swift traffic, she assails your ear with an incessant din and your eye with the unsightliest railroad that human ingenuity has ever contrived. She has sacrificed the amenity of her streets and the dignity of her buildings to the false god of speed. The men of New York, as they tell you with an insistent pride, are 'hustlers', but the 'hustling' probably leads to little enough. Haste and industry are not synonymous. To run up and down is but a form of busy idleness. The captains of industry who do the work of the world sit still, surrounded by bells and telephones. They show themselves furtively behind vast expanses of plate glass, and move only to eat or sleep. It is the common citizen of New York who is never quiet. He finds it irksome to stay long in the same place. Though his house may be comfortable, even luxurious, he is in a fever to leave it. And so it comes about that what he is wont to call 'transportation' seems the most important thing in his life.

- The author uses 'she' for New York because
 - New York has more women than men
 - 'beauties' refers to women only
 - it is conventional to do so
 - 'prodigality' is a human trait
- The second sentence (Driven...contrived) implies that
 - New York is a very ugly city
 - New York shows how skilled human beings can be
 - New Yorkers are vain and hurried
 - in New York one experiences speed, noise and ugliness
- The third sentence (She has... speed) shows that the author is opposed to
 - too much speed
 - living in New York
 - dignified buildings
 - streets with amenities
- The expression "the 'hustling' probably leads to little enough" in lines 9-10 has been used to mean

- haste makes people proud
 - haste does not always result in hard work
 - haste is not always enough
 - industrialists should avoid haste
- The phrase 'busy idleness' in line 12 means
 - being more busy than idle
 - being more idle than busy
 - being busy but looking idle
 - being idle but looking busy
 - According to the author, eminent industrialists
 - are idle people
 - work secretly
 - do not move about often
 - believe only in eating and sleeping
 - The passage gives a true picture of big industrialists'
 - domestic life
 - mode of working
 - secret habits
 - office life
 - The attitude of the author towards the common citizen is one of
 - disapproval
 - sympathy
 - pity
 - anger
 - In line 19, 'he is in a fever to leave it' employs the word *fever* to mean
 - too much haste
 - nervous excitement
 - anxiety
 - compulsion
 - 'Transportation' looks important to the average New Yorker because
 - New York is a big city
 - he is proud to reach his destination early
 - he has to do running about for his bosses
 - he finds being for long in the same place tedious

It is evident that there is a close connection between the capacity to use language and the capacities covered by the verb 'to think'. Indeed, some writers

have identified thinking with using words: Plato coined the aphorism, 'In thinking the soul is talking to itself'. J.B. Watson reduced thinking to inhibited speech located in the minute movements or tensions of the physiological mechanism involved in speaking; and although Ryle is careful to point out that there are many senses in which a person is said to think in which words are not in evidence, he has also said that saying something in a specific frame of mind is thinking a thought.

Is thinking reducible to, or dependent upon, language habits? It would seem that many thinking situations are hardly distinguishable from the skilful use of language, although there are some others in which language is not involved. Thought cannot be simply identified with using language. It may be the case, of course, that the non-linguistic skills involved in thought can only be acquired and developed if the learner is able to use and understand language. However, this question is one which we cannot hope to answer in this book. Obviously being able to use language makes for a considerable development in all one's capacities but how precisely this comes about we cannot say.

At the common-sense level it appears that there is often a distinction between thought and the words we employ to communicate with other people. We often have to struggle hard to find words to capture what our thinking has already grasped, and when we do what our thinking has already grasped, and when we do find words we sometimes feel that they fail to do their job properly. Again, when we report or describe our thinking to other people we do not merely report unspoken words and sentences. Such sentences do not always occur in thinking, and when they do they are merged with vague imagery and the hint of unconscious or subliminal activities going on just out of range. Thinking, as it happens, is more like struggling, striving or searching for something than it is like talking or reading. Words do play their part but they are rarely the only feature of thought.

- Thinking and using language, according to the author, are
 - unrelated
 - closely connected
 - identical
 - mutually dependent

COMPREHENSION BLUES

How comprehensible is our series *Better English*, which we introduced in January 1985? Has the feature helped you to 'better' your English? Write to us, your frank opinion on the utility or otherwise of the series. You may be one of the 10 to win a prize in the draw of lots, on the incoming letters on the topic.

and style is their belief in

- (a) the soul's capacity to talk to itself
 - (b) some relation between most thinking and language
 - (c) thinking being unexpressed speech
 - (d) complete identity between thinking and speech
3. The author himself thinks that
 - (a) language use and thinking are the same
 - (b) thoughts are not dependent upon language
 - (c) language use and thinking are not altogether identical
 - (d) it cannot be known whether thought and language are related
 4. The most suitable heading for this extract can be
 - (a) Language without Thought
 - (b) Language and Thought
 - (c) Identity of Thinking and Speech
 - (d) Thought without Language
 5. To strengthen his point of view the author brings in the authority of
 - (a) some well-known writers
 - (b) philosophers and scientists
 - (c) empirical evidence
 - (d) normal understanding

III It is almost impossible to escape from advertisements. Hoardings stare down at us from the sides of the roads; crude neon signs wink above shops; jingles and slogans assault our ear; in magazines, pictures of washing machines and custard powders take up more room than the letter-press. All these are twentieth century developments which have grown side by side with the spread of education and technical advances in radio and T.V.

Advertising assaults not only our eyes and ears but also our pockets. Its critics point out that in this country 1.6% of national income is spent on advertising and that this advertising actually raises the cost of products. When a housewife buys a pound of flour, 5% of what she pays goes to some advertiser or other, even if she has not bothered to ask the shopkeeper for a particular brand. If she buys a named brand of aspirin, up to 29% of what she pays may represent the cost of advertising the name.

These amounts seem a great deal to pay for the questionable benefits of advertising, but there are a few things to be said in its favour. Although some things cost more because of advertising, other things cost less. Newspapers, magazines, commercial radio and television all carry advertisements, and the money received from the advertisers helps to lower the cost of production. In this way we get information and entertainment at lower prices than would otherwise have to be charged, and so what we lose on the swings we gain on the roundabouts. Apart from this very

some extent ensures that a product will maintain its quality. It also gives rise to competition among manufacturers, which benefits the customer by offering him a wider choice. Competition may even succeed, in some cases, reversing the influence of advertising and causing a reduction in price.

1. The author regards advertisements
 - (a) as an evil necessity
 - (b) as an unmixed evil
 - (c) with mixed feelings
 - (d) as highly beneficial to the consumer
2. Find out three examples from the passage of verbs and adjectives, which indicate the author's negative view about advertisements.
3. In how many ways does advertising affect the consumers adversely? Elaborate.
4. What inference can one draw from the clause 'even if she has not bothered to ask the shopkeeper for a particular brand' in the sentence in which it occurs?
5. Pick out from the text a part of a sentence which directly expresses the author's doubts about the value of advertising.
6. Explain what is meant by 'what we lose on the swings we gain on the roundabouts'.
7. In what sense can advertising prove self-defeating?

IV By far the most common difficulty in study is simple failure to get down to regular concentrated work. This difficulty is much greater for those who do not work to a plan and have no regular routine of study. Many students muddle along, doing a bit of this subject or that, as the mood takes them, or letting their set work pile up until the last possible moment.

Few students work to a set time-table. They say that if they did construct a time-table for themselves they would not keep to it, or would have to alter it constantly, since they can never predict from one day to the next what their activities will be.

No doubt some temperaments take much more kindly to a regular routine than others. There are many who shy away from the self-regimentation of a weekly time-table, and dislike being tied down to a definite programme of work. Many able students claim that they work in cycles. When they become interested in a topic they work on it intensively for three or four days at a time. On other days they avoid work completely. It has to be confessed that we do not fully understand the complexities of the motivation to work. Most people over about 25 years of age have become conditioned to a work routine, and the majority of really productive workers set aside regular hours for the

tough-handed school of workers is usually very contemptuous of the idea that good work can only be done spontaneously, under the influence of inspiration. That most energetic of authors, Anthony Trollope, wrote: "There are those... who think that the man who works with his imagination should allow himself to wait till inspiration moves him. When I have heard such doctrine preached, I have hardly been able to repress my scorn."

Not many people are gifted with Trollope's great energy and physical strength, but he was undoubtedly right in declaring that a person can always do the work for which he is fitted if he will give himself the habit of regarding regular daily work as a normal condition of his life. Many creative writers have in fact disciplined themselves to perform a daily stint. The great Italian dramatist, Alfieri even made his servant tie him to his table.

1. What does the author mean by the phrase 'muddle along'?
2. What is the common objection to working to a set time-table?
3. What is meant by 'working in cycles'?
4. Point out evidence from the text to prove that the author is not given to claiming universal knowledge.
5. What would be the best opposite of the word 'spontaneously' as used in the third paragraph?
6. Point out an example from the text where the author overtly expresses agreement.
7. What extreme example of regular concentrated work do you find in the passage?
8. The best heading for the above passage will be
 - (a) Advantage of a Set Time-Table
 - (b) The Organisation of Study
 - (c) Motivation to Work

(Concluded)

SUMMING IT UP

Ancient India made three notable contributions to Mathematics, namely, the notation system, the decimal system and the use of zero. The Indian notational system was adopted by the Arabs and spread to the Western world by them. In fact, the Indian numerals had been used in India for centuries before they appeared in the West. The decimal system was also first used in India and its earliest epigraphic evidence dates back to the 5th century A.D. Aryabhata, the famous mathematician, was associated with it. Finally, the zero was discovered by Indian mathematicians as early as the 2nd century B.C. whereas in Arabia its earliest use was made in 873 A.D. From the very beginning, zero was considered a separate numeral by Indian mathematicians and used in arithmetic sums too.

STEPS TO SUCCESS

The UPSC issues application forms for the Civil Services Exam sometime in December. The Prelims are held in June, the subsequent year and the Mains are held sometime in Nov-Dec, followed by the Interview in March, the following year. This gives the candidate almost 14-15 months time to prepare for the exam.

While preparing for the Prelims, attention may be paid to the Mains as well. One should rather prepare for the Mains with due emphasis on questions that may also be expected in the Prelims.

Mains

Do not wait for the declaration of the Prelims results. Prepare for the Mains right from the day the Prelims are over; this will help you to maintain continuity and understanding of the subjects. This is more important for the General Studies paper where continuity is to be maintained in your knowledge of current events.

Minimum essential marks are to be scored in the qualifying papers and maximum attention is to be paid to Optionals and General Studies.

The qualifying papers (English and Indian language) are of matriculation standard. They should be tackled in brief, immediately after the Prelims and then left till the eve of these exams. However, you should do full justice to these papers in the exam hall as they have to be cleared first (as per minimum marks to be decided by UPSC) before the rest of the papers (Optionals and General Studies) are evaluated.

Interview

Keep reading the General Studies paper after the Mains. In the interview you are likely to be asked more about General Studies rather than the Optionals.

Interview is of 250 marks. Whereas out of every two candidates one is selected for the Civil Services, the marks obtained in the interview determine the allocation of services (IFS, IAS, IPS, etc.).

In the interview one is judged on the basis of one's personality, depth of knowledge and expression (including the power to analyse and think logically). You must be well informed about the Civil Services. In fact any information specified in your biodata can lead to a question from the interviewers.

General Studies

General Studies is an important subject for Civil Services, not only at every stage of the exam (Prelims, Mains and the Interview) but also for the civil servants. Civil Services are 'Generalist' services and civil servants are supposed to know something about everything, and that is precisely the

scope of General Studies.

The General Studies course is very wide. Though both the papers have sufficient choices, the papers are very lengthy and questions asked are very specific. Hence you cannot afford to leave out any topic.

Preparation for the General Studies paper has to be made over the years. It takes time to follow the concepts in Politics and Economics and, to have a total view, one has to trace the origin of events, e.g., in order to follow India's stand on a seat for Kampuchea at NAM one has to trace back history. Similarly the Indian defence scenario has to be considered in the light of preparedness of India's neighbours and threats to the country's security—both internal as well as external. In the same way, the concept of Planning in India has to be evaluated in the light of the country's shattered economy at the time of independence, dependence of agriculture on the monsoons, post-war inflation, etc.

This is one particular subject where abundant material is available and one has to be choosy about the material to be read. Markets are flooded with books on general knowledge and magazines dealing with current affairs. However, you must go through old question papers and study the type of questions asked.

GS-I

In the first paper, the section on Indian History and Culture usually includes questions referring to Indian National Movement, Indian renaissance, social reforms, Indian dance, sculpture, art, etc. One or two questions are devoted to the teachings of Mahatma Gandhi, Pandit Nehru and Rabindranath Tagore. Questions are usually straightforward and students are advised to be specific and answer to the point. Most of the study material is available in NCERT books for classes IX to XII, in the concerned subjects.

The second part of the first paper concerns current affairs of national and international importance. Important meetings, conferences, sport events and important places are usually asked. You can rely on government publications like *India Year Book*, *Yojana*, *Indian And Foreign Review*, *Kurukshetra*, etc. These, in addition to newspaper reports, editorials, radio and TV, can update your knowledge.

The third part of the first paper concentrates on statistical analysis and graphs. Candidates are asked to draw inferences and conclusions on the basis of given data. Study material is available in any

good book on statistics at the intermediate level. Candidates must practise such exercises repeatedly in order to gain proficiency.

GS II

The second paper mainly consists of Indian Polity and Constitution. Besides NCERT books, D.D. Basu's book on Constitutional Law is very useful for the subject. Some of the relevant topics are Democracy (Parliamentary vs Presidential system), Fundamental Rights and Directive Principles of State Policy, the Parliament and its committees, role of governors, elections, etc.

Indian economy including Planning constitutes the major part of the second half of the paper. Study material is available in *Yojana*, *Plan Document Of Government Of India*, *Indian Economics* by Dutt and Sundaram. One or two questions are devoted to rural development programmes and schemes.

Questions on Indian Geography (socio-economic and political) concern the location of modern industries (iron and steel, oil, etc) and population studies. Study material is available in NCERT books on Geography. Questions relating to soils of India may also be asked.

The role of science and technology in India constitutes the subject matter for nearly 100 marks in the second paper. Questions normally cover the following topics:

- * Environment, pollution, soil erosion, etc.
- * Exploration programme, space, Antarctica etc.
- * Energy crisis, atomic energy, etc.
- * Role of science and technology in the development and modernisation of agriculture, animal husbandry, communication, etc.

Study material can be found in newspapers, *India Year Book*, *Indian And Foreign Review*, etc. You are supposed to know the fundamental aspects of these subject areas and must be able to show your awareness to the changing scene in the country—India's achievements as the largest source of scientific and technological manpower in the world; as the pioneer state in sea mining; the three expeditions to Antarctica; our indigenous multipurpose satellites, etc.

The General Studies papers try to test your awareness, alertness and receptiveness to the developments in the country. They judge how much you have been influenced by your surrounding environment and your suitability for the job of a 'generalist' in the Civil Services.

(concluded)

EDUCATION NEEDS AWARENESS

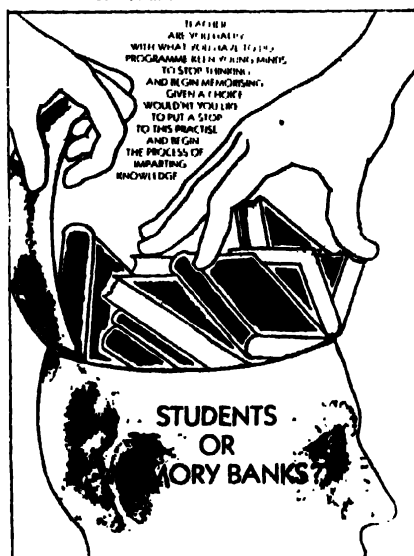
BY VIJAY KONWAR

EDUCATION - DOORWAY INTO

NOWHERE

1. IT IS LEADING
2. A LINGO OF CONFUSION,
3. ELUSION
4. COMPETITION
5. STIM
6. IT PREPARES THE CHILD
7. PRECISELY NOTHING
8. WE WANT
9. CHILDREN
10. CONTINUE FLOURISHING
11. AS WASTELAND
12. END UP AS
13. UNPRODUCTIVE,
14. USED ADULTS.

WE WANT THEM TO BEGIN LEARNING?



As with everything else in India, in the vital sphere of education too, there is a massive gap between what should be and what actually is. It goes without saying that salvation for the Indians lies in a concerted effort, at both the public and governmental levels, to close this gap. Arousing social consciousness thereby becomes an imperative necessity. And, in this context, it would be in the fitness of things to focus attention on the phenomenon called national awareness advertising, which has established itself as

an organised institution in many countries because of its proven effectiveness in changing people's consciousness.

Keeping in view India's manifold problems, education being one of them, and a deepening social crisis, there is hardly any need to emphasise that a collective and organised effort ought to be made to promote public service advertising. The institution of the Ashok Jain Awards for National Awareness Advertising in 1984, by Bennett, Coleman & Co Ltd, publishers of the Times of India group of publications, could not have come a day sooner. And as a fitting tribute to the urgent need for resolving the problem of education, the pictures accompanying this article won a cash award of Rs 10,000 for a 'renewed vision provided for an otherwise well-known issue'. They were entered in the competition by Shilpi Advertising, Ahmedabad.

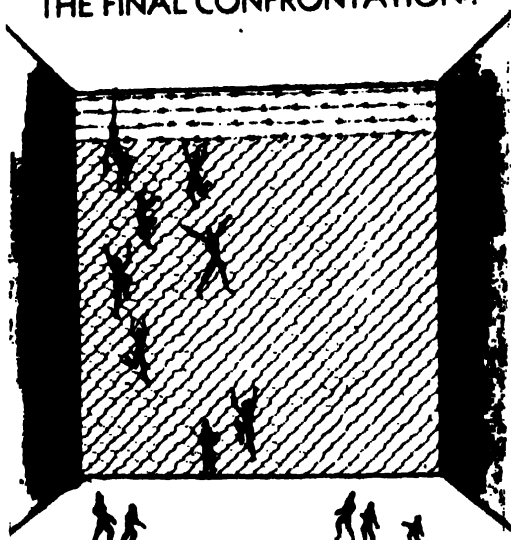
It is quite evident, therefore, that in this first stage of urging people to do something about education in India, advertising for national awareness can play a crucial role. The exhibits make it abundantly clear that the people themselves are ultimately responsible for the present order of things, and that it is a futile exercise to point the finger at the government or even wait for it to make the first move. The people must be willing to take the initiative and, on the basis of a strong unity, born out of a common well-understood purpose, press for change. When such a thing happens, not even the most insensitive and unresponsive of governments can remain unmoved.

CASH IN, AMATEURS

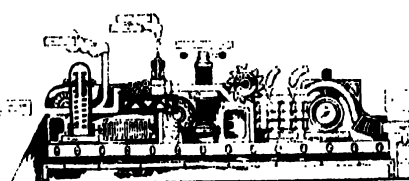
Cheer up, young amateurs! You won't believe this, but it's true. A cash prize of Rs 10,000 awaits you if you are below 21 and your creation happens to be the best print media advertising campaign to promote greater awareness of important social issues and public causes. All you have to do now is to give free play to your amateur yearnings and who knows you might just turn out to be the winner of this prestigious Ashok Jain Award for National Awareness Advertising, instituted by the publishers of the Times of India group of publications, Bennett, Coleman & Co Ltd. And, to top it all, your winning entry will hobnob with professional winners in exhibitions for public viewing, and will be given free space in all the leading publications.

Last date for the receipt of entries for the 1985 competition: Jun 30, 1985. For more details please write to Dinesh Mishra, Social Secretary, Bennett Coleman & Co Ltd, 7, Bahadurshah Zafar Marg, New Delhi-110 002.

EXAMINATIONS - THE FINAL CONFRONTATION?



THE EDUCATION MACHINE



IF YOU CARE DO SOMETHING

Some encouraging signs have begun to appear on the education horizon, with the Rajiv Gandhi Government having firmly lodged itself in power with the help of an overwhelmingly massive mandate. The determination and fresh approach with which the new government is addressing itself to the herculean task of educational reform is an unmistakable proof of its correct reading of the hidden implications of the mandate. This demonstration of sensitivity to a very sensitive issue is certainly in keeping with the vexatious demands of the situation and is more than welcome. The setting up of an expert panel to suggest a new education policy, the instant talk of delinking jobs from degrees and the message that the new PM meant business have encouraged hope.

SPORTS FOR A HIGHER JUMP

(Continued from page 42)

delivery is an off-break.

Outswinger: Ball swerving from leg to off in flight

Sightscreen: Movable white (or sometimes blue) board or sheet situated on the boundary directly behind the bowler's arm to give the batsman an unhindered view of the ball in flight.

Silly (of a fielding position): Close in, as in *silly mid-off*, *silly mid-on*, fielding positions closer to the batsman than mid-off and mid-on.

Square leg: Leg-side fielding position level with the wicket; **short square leg:** leg-side fielding position level with the wicket but closer in than square leg.

Willow: Colloquial term for a bat.

York: To bowl a batsman with a yorker, a delivery pitching under the batsman's bat as he plays his stroke.

FOOTBALL

Back: One of two team positions nearest to the goal being defended; **left back:** defender on left side of field and nearest to the goal; **right back:** defender on right side.

Corner kick: Kick made from corner of field when ball was last touched by defending player before it crossed the goal-line, wide of goal or above the cross-bar.

Dribble: To propel ball on one's feet; to attempt to beat opponents in this manner.

Dummy: Feigned manoeuvre to trick opponent.

Field, field of play: Rectangular field on which football is played. Its length must be not more than 130 yds nor less than 100 yds and its breadth not more than 100 yds nor less than 50 yds.

Four-two-four: Tactical positioning of players much used by European teams. Team lines up with four backs, two half-backs, and four forwards, in addition to the goal-keeper.

Goal: 1. Structure at each end of field, consisting of two upright posts 8 ft high and 8 yds apart, joined at top by a cross-bar and usually backed by a net. 2. Score in football—by forcing the ball over the goal-line between goal-posts and beneath cross-bar without infringing the rules; **goal area:** rectangular space 20 yds wide and six yds deep in front of each goal; **goalkeeper:** player positioned in goal to prevent opponents scoring, the only player allowed to touch the ball with his hands; **goal kick:** taken by defending team after the ball has crossed its goal-line, but not passed into the goal, after being last played by an opponent; **goal line:** line marking end of field of play; **goal mouth:** area immediately in front of each goal; **goal post:** one of the two posts forming a goal.

Indirect free-kick: Awarded after an infringement, from which a goal can be scored only if it first touches a player other than the kicker.

Inside forwards: The inside left and inside right; **inside left:** position in forward line between outside left and centre-forward; **inside right:** position in forward line between outside right and centre-forward.

Offside: Denotes a player who is nearer his opponent's goal-line than the ball is at the moment when the ball is played, unless: (a) he is in his own half of the field of play; (b) there

are two opponents nearer their own goal-line than he is; (c) the ball last touched an opponent or was last played by him; (d) he receives the ball direct from a goal-kick, corner kick, throw-in, or when dropped by the referee. Penalty for offside is a free-kick to opposing side from the place of infringement; **offside trap:** tactic by which defenders attempt to put an attacker offside.

Penalty: Awarded to team which is victim of foul play or **hands** within opponents' penalty area; **penalty area:** space 18 yds deep and 44 yds wide in front of each goal; **penalty kick:** result of penalty award, a free kick taken 12 yds from opponents' goal, defended only by the goalkeeper; **penalty spot:** a mark 12 yds from each goal on which the ball is placed for a penalty kick.

Scissors, scissors kick: Kick made by jumping, raising one foot, and kicking the ball with the other.

Throw-in: Ball thrown into play with the hands and from above the head after it has crossed one of the touch-lines; awarded to the team opposing that which last played the ball before it crossed the touch-line.

Touch-line: Line marking each side of the field of play.

Wing: Strip of field adjacent to the touch-line; **one the wing:** playing in this part of the field; **winger:** player in wing position of forward line, outside right or outside left.

HOCKEY

Corner: Hit from corner of the field awarded to attacking side after the ball has been accidentally sent over the goal-line by a defender from within his own 25-yd line; **penalty corner:** hit awarded to attacking side when the ball has been deliberately sent over the goal line by a defender from anywhere on the field. The hit may be taken from anywhere on the goal-line, but not within 10 yds of a goalpost.

Penalty stroke: A push, flick or scoop stroke taken from a spot 8 yds in front of the centre of the goal. An award made to the attacking side after an intentional breach of the rules by the defending side to prevent a goal being scored

Reverse stick: To hit the ball with the back of the stick; a foul.

Roll-in: To return the ball to play after it has crossed the side-lines, by rolling it on to the pitch; **roller-in:** player who rolls in the ball after it has been put out of play by an opponent.

Scoop: To hit under the ball, causing it to rise; a foul if done dangerously.

Side-line: White line marking the side limits of the pitch.

Sticks: The raising of the stick above shoulder level; a foul if done dangerously or if such a movement impedes an opponent.

Striking circle: Roughly semi-circular area with a radius of about 16 yds, immediately in front of each goal, within which the ball must be struck for a goal to be scored.

Twenty-five-yard line: A white broken line 25 yds from, and parallel with, each goal-line.

LAWN TENNIS

Ace: Shot which an opponent fails to return; **service ace:** fast, unreturned service ball.

Advantage: The first of two successive points needed by either player to win the game when the score is deuce; **advantage game:** the

first of two successive winning games needed by either player to win the set when each has won five games or more; **advantage server:** call in scoring to indicate that the player receiving the service has won the first point after deuce.

Back court: Part of the court between the service line and the baseline.

Backhand: Stroke made with the hand turned inward by $\frac{1}{4}$ turn from eastern grip, and the thumb diagonally across the back of the handle; **backhand court:** oblong area on left-hand side of the court into which the ball must be served for the second point (and alternate points) of the game.

Backspin: Spinning motion imparted to the ball, so that it does not move on to the receiver at the expected pace after touching the ground.

Baseline: Boundary line at each end of a court; **baseline player:** tends to play from positions near the baseline and hesitates to approach the net.

Cannonball: Colloquial term for fast service.

Covered court: An indoor court, usually with a wooden surface.

Davis Cup: Challenge cup given by an American, Dwight Davis, for an annual international competition between teams of men.

Double fault: Breach of the rules, particularly in serving; **foot-fault:** an offence in serving, in which server allows one or both feet to cross the baseline.

Federation Cup: Cup for ladies' teams presented by the International Lawn Tennis Federation to celebrate its 50th anniversary in 1963.

Forehand: Stroke made on the right side of a right-handed player, **forehand court:** oblong area on right-hand side of the court into which the ball must be delivered to start a game and for every second point from then on.

Passing shot: Shot which goes past an opponent.

Scoring: The system of counting the points scored by each player (or pair). The first point for each player is 15, the second 30, the third 40, the fourth, game. If each player wins 3 points, i.e., a score of 40-all, deuce is called: A player must then win two successive points to take the game. The first player to win six games wins a set, provided that he is then leading by at least two games. If he is not, the set continues until one player gains such a lead. In championships, a men's match is usually the best of five sets, a women's the best of three.

Sideline: Line marking boundary on each side of the court.

Smash: Overhead shot in which the ball is struck downward with force.

Step volley: Stroke played with little power before ball bounces, and usually close to the net, so that the ball falls with little bounce on opposite side of net.

Tramlines: Parallel strips down each side of court which increase playing area for doubles games.

Wightman Cup: Cup given in 1923 by Hazel Wightman (former U.S. singles champion Hazel Hotchkiss) for competition between 'ladies' teams from UK and US, held annually, alternately in the two countries.

Wimbledon: Venue of world's most famous lawn tennis tournament, in South London; **Wimbledon fortnight:** two weeks each year (June-July) when All-England Championships are held there. ■

Coffee Break

HUM LOG: SOME SOAPY STUFF



Manohar Shyam Joshi (above left): A tested formula can't fail! Right: Preparing for the street play in Hum Log.

Maggi....! The clarion call sends the entire household staggering into the TV room, all their appetising thoughts focussed on the popular family serial *Hum Log*. Nothing, not even problems of *sans ki badbu* or *dant ka dardh* could cause enough *pareshani* to keep them away from this marathon serial. Introduced last July, *Hum Log* has ushered in the entertainment era in Indian television.

While the ads are busy displaying their wares, the viewers exchange some grapevine notes. "People visited Badki and begged her to marry Ashwani!... they call Usharani, Mrs Lallu! ...I saw Dadaji basking on the sunny Mandi House lawn!..." Such commentaries, sweet and sour, gradually fade out as the introductory song "*Aiye...*" transfixes them to the flickering cathode ray tube. Ssh...it's time for *Hum Log*!

Evidently, there is a perfect mass rapport with the *Hum Log* family members, who wade through the rapids of life's trials and tribulations. "That's life today, particularly in the middle and lower middle-class Indian families," convinces Manohar Shyam Joshi, the author of the serial. "*Hum Log* is a candid portrayal of life where success and happiness is often eclipsed by the struggle for survival," he says. Though the variety of issues highlighted in the serial may not concern all the upper class urbanites, other sections of the society can easily identify themselves with its central characters. Therein lies the secret behind the amazingly large mass acceptance of this otherwise mediocre serial.

Tracing the origin of *Hum Log*, jointly sponsored by Doordarshan and the Bombay ad woman, Shobha Doctor's Time and Space Video Communication firm, Joshi recalled the active role of I & B Secretary, S.S. Gill, whose brain child it was. Gill was all out to expand the TV network in the country and make the pro-

grammes more interesting. The underlying idea was to produce an entertaining, message-oriented serial for nation-wide viewing. And the natural corollary that followed the serial idea was to get hold of a big wig company to sponsor it.

The genesis of entertainment was traced to the West where the bubbly soap opera serials had taken America by storm. "It is their staple diet," Joshi remarked. The serial idea in itself is an outgrowth of early radio programmes of 1930s, which were mostly soap operas and detective serials. They mainly concerned the emotional involvement of a character who narrated a different story in each episode.

Contemporary TV adaptations of these serials are now viewed with mesmerised interest in programmes like soap operas, situation comedies and prime-time serials (peak viewing period programmes between 9 p.m. to 12 mid-night) in the US. However, it's the frothy soap operas that have lathered, to the immense satisfaction of American women in particular. It may be added that soap operas have no similarity with musical operas. They got their name 'soap' from their original sponsors Proctor & Gamble, the largest manufacturers of soaps in the US. "The target audience are women and it is telecast during the forenoon when housewives could comfortably view them," Joshi elaborated. The episodes are written by one single writer, mostly women—Agnes Nixon being the highest paid woman soap writer. Indeed, a woman's forte it is—both soap and the operal

Our Soap

Basically, *Hum Log* follows the American

formula where the episodes are not based on a complete story with a beginning and an end. "The US soap operas are woven around a significant character or a group of characters," Joshi pointed out. Every character is actually 'designed' by a character designer.

The portrayal of the multi-faceted lives of a set of inter-related characters, in *Hum Log*, though lacking in finesse and dexterity, marks a major deviation from the regular cinema stuff. Joshi has also taken care to use the American passwords 'character identification', in constructing his story line. The *Hum Log* members are representative of the characteristic idiosyncrasies of a majority of Indians. For example, an irresponsible, alcoholic father, Basesar Ram, who lives in a world of Utopian dreams and plays 'yes son' to a dominating mother is quite common in both urban and rural India. A harassed, helpless Bhagwanti, who bears with all the excruciating remarks flung at her by her sharp-tongued mother-in-law, symbolises the traditional Indian woman.

Identification is even stronger with characters like the lovable Dadaji who has a feasible solution for all family problems; the quixotic son who persistently exhibits his 'lalluism', the flamboyant Nanhe who does as he pleases, the wide-eyed, shy daughter, Badki who suddenly wakes up to the hypocrisies of social norms; the pampered Manjhli who falls from grace while saddling over her illusory dreams of attaining stardom and the chirpy Chutki who aspires to be a doctor. Usharani is portrayed as the daughter-in-law with a difference who refuses to take injustice lying down and leads her immature husband, by the finger, on to the path of enterprise and determination.

Apparently, the audience takes vicarious pleasure from these *Hum Log* characters (not considered actors) who appear to be very much like them in their dress, language, income, aspirations and interests. Joshi also has each of his characters "represent a separate generation altogether" so that there is interesting tele-material for both, young and old, who watch the show. "The reading of Ram Charitra Manas is a pleasant emotional experience for the older generation and the sprightly Chutki is symbolic of the intelligent, aspiring youngsters", Joshi exemplified. The plus points of joint family life, totally unrecognised and underestimated by the present social milieu, was incorporated in *Hum Log* with a deliberate attempt to highlight the value of personal relationships. "I have known a Badki, Manjhli and Chutki," Joshi recalled, nostalgically.

Hum Log also has a suggestion of distinct soap opera elements like packed dialogues, monologues and soliloquies, apparent in the US soap operas. Though lacking in professional polish, these elements can be traced to Lallu's

imaginative interviews with a bevy of pretty young girls and in Nanhe's grotesquely portrayed dream of heading the underworld. "Such dialogues and monologues do not appeal to the sophisticated and may also irritate the intelligent," Joshi admits. Not surprisingly, *Hum Log* scoffed at by the elite and poor editing, laboured style and

cheap, inexpensive sets and "internalised action" of a guest, sounding of the call-bell, and reaction enough, according to Joshi. But these ingredients have prevented the serial from becoming the pseud's cup of tea.

Filmi Twist

Viewers of *Hum Log* would agree that the escapist trends portrayed by the 'filmi' touch given to the otherwise down-to-earth serial, is totally unwarranted. It is hard to believe that the same writer could have imagined such inconsistent situations in the life of a middle-class family, part of the story is as realistic as the life of the family next-door; while the other half reeks of the weird absurdity of Bombay box-office flops. If any purpose has been served by adding such scenes to the straight forward story line, it has ended up in making *Hum Log* a clumsy patch-work.

The only saving grace is that there has been

HUM LOGON KI PASAND



Rajesh Puri yani... woh kya kahen hain j...
Lallu!

Who is the most popular character of the much talked about serial *Hum Log*? *CCTimes* held a random survey, asking a cross-section of Delhiites on their favourite *Hum Log* star. And who do you think was rated the most popular? No less than the absent-minded Lallu!

Now the ball is in your court. You may send in your opinion on the most popular *Hum Log* character latest by **May 25**, on a postcard with your name, address and age. Also indicate in four lines the reason for your choice. The first 10 nominators to be decided after a draw of lots) of the most popular character have an attractive but surprise gift waiting

THE SERIAL THAT LAUNCHED A THOUSAND OTHERS

Entertainment television is here to stay. And *Hum Log* has been instrumental in introducing the era of sponsored entertainment in India. The popular serial has caught on and opened fresh avenues for independent producers who want to display their creative genius and cinematographic talent in producing a successful programme. The wide audience response to *Hum Log* has set off a chain reaction in the TV film circle and a whole row of producers, young and old, have jumped onto the TV bandwagon. Today, most of us trace out the days of our lives through the ubiquitous TV serial.

After *Hum Log* came the rip-roaring serial *Yeh Jo Hai Zindagi*—a pure, refreshing, light comedy produced by S.D. Oberoi, launched in September, last.

October brought *Mashoor Mahal*, the televised version of an earlier radio programme, *Double or Quits*. The programme has its way of entertaining people through ticklish brain teasers. But Bombay viewers alone have the privilege of participating in the quiz and winning

no deviation from the no hero-heroine element, a strong feature of US soap operas. "Badki is popular as Badki and not as Seema Bhargava. And Lallu is good old Lallu; neither Lalit Prasad nor Rajesh Puri," Joshi pointed out. There is no typecasting of characters (as in films); they actually exist for the audience.

Is he writing *Hum Log* all by himself or is the labour shared? "Why should I let out the secret?" Joshi quipped. "And as for the filmi touch, the producers developed cold feet on the success of its simple theme," he explained. Joshi is optimistic about the success of his serial. "After all, it is based on a tested US formula, which has clicked." "The filmi twist was introduced for better visuals (Manjhi on stage doing a disco and some 'dhoom damaka' scenes when the underground leader was seen escaping). But the visuals are hardly eye-catching. They, instead, smack of poor acting and immature production techniques.

Feedback

The viewer response to each of the *Hum Log* episodes has been overwhelming. "Their view points are often considered," says Joshi. Nanhe did not turn into a smuggler because the viewers protested strongly against it and even threatened to break their sets if he did; Lallu's return, after his flying visit to the Dubai airport, was also the viewers' choice. "But the feedback ought to be more systematised, with a complete infrastructure like, in the US and Mexico, in order to handle the letters that flood Doordarshan," Joshi suggested.

Hum Log was originally contracted by Doordarshan for 200 episodes. Now that it is expanding into an Arabian Nights series, the authorities are demanding that the show be wound up. Commenting on its bullock-cart pace, Joshi had this to say, "A good soap opera moves at life's pace. American soap operas untringly run till their 200th episode."

The Message

As for the propagandist overtones in *Hum Log*, the serial was originally conceived for propagating the family planning message. The idea had delivered the goods in Mexico where the

the magnificent prizes offered by the sponsors.

Basu Bhattacharya's *Anveshan* introduced in December was a revelation on rural Indian life, portrayed through the eyes of a young writer and her photographer friend. The slow-paced film was pepped up by the two lively youngsters speeding through the villages on a motorbike.

The recent additions are *Apradhi Kaun*—a series of diluted mystery thrillers which have failed to thrill; and Hindustan Thompson Video's (HTV) *Khanda*, a big-budget serial about a self-made tycoon, based on the popular American serial *Dynasty*. *Khanda* also has undertones of *Kalyug*.

Popular producers are also taking to the electronic media. Sai Paranjpe's comedy serial *Ados Pados* on the lines of *Katha*, propagates Hindi as our national language. *Idar Udhar* runs on the lines of the dialogue-packed US soap operas (Three Is Company).

Several other sponsored serials like *Banno Rani* and a sitcom series being produced by B.R. Chopra are also underway.

Mexican soap operas, loudly hammering the small family norm, had helped reduce the baby boom in the country.

A Mexican television expert, Sabo was instrumental in selling messages through soap operas. Values of national importance like patriotism, literacy and family planning were to be instilled into people's minds through entertainment. Even messages on moral principles like selflessness, value of truth, goodness, etc were got across through the electronic media. The policy was backed by the Director of Communications, UN Institute for Population Studies, New York. David O. Point Dexter, and the entire programme made headway in Mexico.

Our soap is an Indianised amalgamation of both the US and the Mexican soap operas. Instead of administering an overdose of the family planning message, running through interminable episodes, the authorities preferred to use the serial as a pulpit for debating on a number of social issues gripping contemporary society. Problems of unemployment, dowry, corruption, strikes, adoption and, of course, the priority issue of birth control, are being highlighted. It could only be hoped that the writer continues to throw light on the finer aspects of child upbringing, human behaviour, mother-in-law-daughter-in-law relationship, etc—problems which ultimately boomerang on the society.

Hum Log is being shot at the cost of Rs 85,000, at Dharendra Brahmachari's Aparna Studios, Gurgaon. Doordarshan earns Rs 35,000 from the sponsors who buy 30 minutes of precious TV time for the serial.

Today, almost 70% of the Indians linked by the national network are exposed to the visuals on the idiot box. And not many can distinguish between TV programmes which make for intelligent viewing and others meant for senseless gaping. But, if the major function of the commercial TV is only to promote sales, why would the network office bother about the quality or the popularity of a programme?

Prabha Gopal, New Delhi

Sports Quiz-42 Keywords-42

BY NAROTTAM PURI

WIN RS 100 IN BOOKS

1. Name the only player to have hit a century and a double century in his first two innings in Test cricket.
2. Name the four players who have hit a century in their first two Tests.
3. Which sport is played on a field of 300 x 200 yard size?
4. Who won the DCM Football Tournament in 1984-85?
5. Which three weapons are used in the men's fencing events in the Olympics?
6. Which colour balls are being tried in the day-night matches in Australian cricket?
7. With which athletic event are Thierry Vigneron and Sergei Bubka associated?

PRIZES

SPORTS QUIZ-42:

2 First Prizes

Sports books worth Rs 50 each from **Rupa & Co., New Delhi** to the first two *all-correct* entries (or *one-error* entries if there are no all-corrects) pulled out of the hat.

Plus 5 Consolation Prizes worth Rs 20 each from **Rupa & Co.**

KENWORDS-42.

2 First Prizes

Sidney Sheldon's *If Tomorrow Comes* and Tariq Ali's *The Nehrus And The Gandhis* from **Rupa & Co., New Delhi** to the first two *all-correct* entries (or *one-error* entries if there are no all-corrects) pulled out of the hat.

Plus 5 Consolation Prizes—Alistair Maclean's *San Andreas* from **Rupa & Co.**

HOW TO ENTER

- Print the answers neatly in capital letters along with your name, age and address. Each crossword must be pasted/clipped on a larger piece of paper.

- You may send in any number of entries but each must be numbered accordingly and accompanied with its respective COUPON.

- Though all your entries will be included in the draw of lots, you will be entitled to only one prize—the highest in case you're getting more than one.

Closing date for the two contests: May 25.

Address your entries to: The Editor, Career & Competition Times, 10 Daryaganj, New Delhi-110 002.

Solutions to this issue's contests will be published in July.

**SPORTS QUIZ
COUPON**

**KENWORDS
COUPON**

BY RANI P. SOMAN

WIN RUPA PAPERBACKS

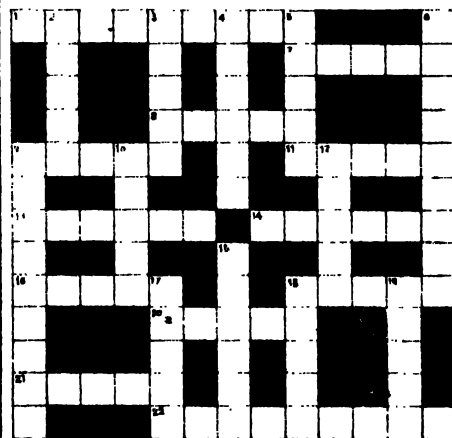
ACROSS

1. American, invented the submarine in 1776 (1. 8).
7. To deliver, surrender, relinquish or resign (5).
8. A historic city, near the west coast of the Korean peninsula, which will be hosting two of the greatest sports events within this decade (5).
9. Ancient city in Italy, founded in the 7th century B.C. by the Etruscans, was the scene of the slave revolt led by Spartacus (5).
11. The science that deals with the criteria of formal reasoning (5).
13. An element, discovered in 1902, derived by atomic disintegration from uranium (6).
14. In Greek mythology the God of agriculture also a planet of the solar system (6).
16. Name of the Brazilian Airlines (5).
18. In north-west America, admitted in 1890 as the 43rd state; also one of the earliest states to adopt woman suffrage (5).
20. The name given to the electronic random number indicator equipment (5).
21. Another term used for a commercial aircraft (5).
22. An electric terminal in an electric device (9).

DOWN

2. A round metal ornament worn by ancient Roman children, also a seal attached to a document (5).
3. A German business executive jet with forward swept wings (5).
4. Strictly, an unscheduled repeat of part of a

5. British geologist whose principles of Geology profoundly influenced 19th century scientific thought, and helped to shape Darwin's ideas (5).
6. Italian engineer whose work on vertical flight led to the development of the helicopter; also, the 'Vespa' scooter model was his invention (1. 8).
9. Indian Airlines' first turbo jet (9).
10. Territory on the shore of Lake Tanganyika where Stanley found Livingstone in 1871 (5).
12. A set of eight things (5).
15. The most important river of South-East Europe (6).
17. A type of painting that portrays a scene of everyday, ordinary life (5).
18. Japanese housewife, who became the first woman to climb Mt Everest, goes up (5).
19. Powerful, smooth-coated and remarkably keen-scented dog, much used in hunting (5).



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KENWORDS-40

Across: 1. Kreisky 4. Beard 6. Leo 7. Arlberg 9. Jowler 11. Seipel 14. Lakh 16. Sarai 17. Day 18. Norma 19. Russian

Down: 1. Kyoga 2. Isseb (reversed) 3. Young 4. Ballade 5. Decibel 8. Low 9. J. Ruskin 10. Echidna 12. PIA 13. Magyar 14. Lions 15. Harun

Winners

First Prize (one-error): 1. J.V.L. Narayana, Kakinada 2. L.G. Mohan Rao, Kakinada

Consolation Prize (one-error): 1. Piyush Sharma, New Delhi 2. A. Shyam, Invandrum 3. M. Suresh, Bangalore 4. I. Sivaji, Rajahmundry (Andhra Pradesh).

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1. Five
2. Javant Shah & Lofy Drows
3. Cricket - U.A.V. Canada
4. *Sunny Days, Idols and' Runs in Ruins*
5. David Luth
6. Kapil Dev on Nov 28, 1984
7. USA

Winners

First Prize (all-correct/one-error): 1. Indeeep Varshney, Dohra Dun 2. Jagdish Parwan, Roorkee.

Consolation Prize (one-error): 1. J.S. Gangwar, Roorkee. 2. Sanka Verma, Bhopal. 3. G. Gareeh, New Delhi 4. K.V.S. Bhaskar, Guntur. 5. Rahul Bahadur, Jaipur.

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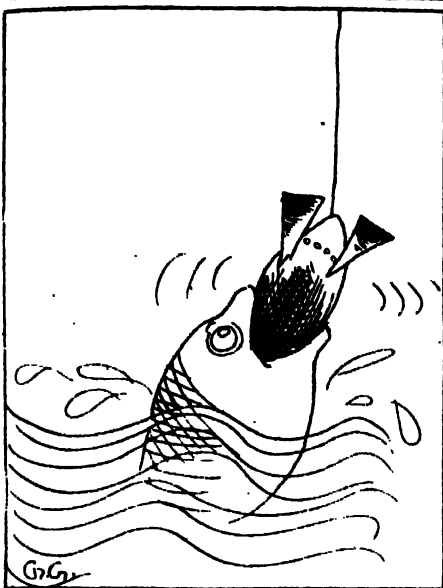


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TO KILL OR NOT TO KILL



Jonathan Schell's *The Abolition** is a timely book, coming when it is most needed. In a world faced by the threat of extinction, it is necessary to re-evaluate the policies followed by nuclear weapons nations who have kept humanity in suspense on a balance of terror. The book is divided into two parts, 'Defining The Great Predicament' and 'A Deliberate Policy'. In the first part the author vividly explains the consequences of a nuclear holocaust and discusses the theories of Albert Einstein, who suggests a "world state" as a solution to the problem, and of the political scientist Bernard Brodie, in whose writings one finds the basic tenets of the doctrine of deterrence: that nuclear weapons will lead to annihilation and, therefore, act as deterrents to war. According to Schell, a world state is a difficult thing to achieve and the theory of deterrence is full of contradictions. Schell is also critical of the current peace movement, which has only backed modest plans of action within the framework of the existing broad policy, such as a nuclear freeze, leaving the deeper political question open for the time being.

The choice that the author offers us in the second part of the book is abolition: first, "the world would, by agreement, institutionalise the broad global stalemate that we are already in, and abolish nuclear weapons". In this stage, differences between nations would not be taken up and resolved but suppressed and postponed. In the second stage, "the frozen world of deterrence would begin to melt and move—peacefully—as new, non-violent means of decision-making were worked out and instituted".

The striking thing about this book is the logical development of ideas. In the space of 160

over his arguments on why he thinks that deterrence alone will not protect the earth and why he thinks that abolition is a better solution and that it will work. The book is rational and poignant and offers humanity a ray of hope. It is extremely well researched and draws extensively from past political testaments as well as contemporary research work.

This, however, does not detract from the quality of writing. In simple language, the author draws portraits of a post-nuclear war world, in colours as vivid as those presented by the film, *The Day After* and, like the film, has the power to move people. It is directed not only at policy-makers, but also at the policy-shapers—the general public. It is a book that everyone must read, even though he or she may not agree with the author's conclusion. It will prod people into thinking about the nuclear predicament which could destroy us all at the press of a button.

S.B., New Delhi

Extract

The argument between the Einsteinian school and the Brodiean school reflected not just a split in opinion but a split in the world itself. For the arrival of nuclear weapons in the world had at a stroke opened a fissure down the centre of human life, placing whole realms of human existence at odds with one another. The traditional demands of man's international political existence, rooted in sovereignty and pursued through the use of force, were suddenly at variance with the demands of man's existence pure and simple, which was now mortally endangered. Political man held a knife to the throat of biological man, but since politics, like every other human activity, is possible only where there are human beings, political man also held a knife to his own throat. At the same time, the demands of man's moral existence, which were meaningless if they did not call on us to hold back at all costs from slaughtering billions of people and perhaps putting our species to death, were at variance with those of man's political existence, which seemed to require that we threaten to do just that, on pain of military defeat by our enemies if we did not. Einstein and Brodie, in a manner of speaking, took up positions on opposite sides of the gap, with Einstein standing alongside trembling, imperilled biological man and asking political man to yield, and Brodie standing alongside dug-in, unbudgeable political man and asking biological man to endure the peril. And each, of course, had a compelling reason for standing where he did, since no one could deny, on the one hand, that the peril was great—and its urgency extreme or, on the other, that the immediate top-to-bottom transformation of international political life was, at the very least, doubtful. A bystander looking for guidance was left to contemplate two conclusions, each of which had apparently been established incontrovertibly by experts: (1) that the nature of physical reality as it had now been revealed by physics made a swift revolution in global politics necessary if human survival was to be assured, and (2) that the nature of political reality as it had revealed itself throughout history made such a revolution impossible....

Einstein and Brodie, each rooted firmly in the reality he knew best, were unable to find common ground. Einstein, the proponent of what was necessary for survival, could not persuade the

other of what was politically possible, nor could he enlarge his conception of it to encompass what was necessary for survival. The world was offered two problematic proposals: one that would solve the problem but could not be brought into being, and one that could be brought into being but did not solve the problem. The gap between them—between imperilled biological man and entrenched political man; between the irresistible force of nuclear weapons and the immovable object of the world's political institutions (immovable, that is, except by nuclear weapons, which could move them right out of existence in an instant); between a resolution of the broad human crisis of the peril of extinction and a resolution of the political crisis of how the world was to be organised without war; between the laws of science and the laws of history; between the dictates of conscience and the dictates of policy; between "idealism" and "realism"; between the "long term" and the "short term"; between the necessary and the possible; between the slowness of political change and the swiftness of the approach of doom—remained unbridged. And it has remained so to the present day.

Sometimes our performance in the postwar period is called a great success, on the ground that we have so far avoided a nuclear holocaust, and much of the credit for the success is given to the policy of deterrence. What this reckoning overlooks is that in the same period the world had built up arsenals of more than fifty thousand nuclear warheads—in short that behind the screen of our deterrence policy we have built the means of our annihilation. Seen in the best possible light, this self-endangerment of our species was a tragic necessity. Seen less forgivingly—and, I believe, more justly—it was the greatest collective failure of responsibility by any generation in history. But, whichever of these it was, self-congratulation is certainly out of order. If someone climbs out on the ledge of a high building and threatens to jump off, we do not stand around congratulating him on his wisdom and restraint in not having jumped yet, and expounding on how safe a place the ledge of a building must be, we seek to pull him out at the earliest possible opportunity.

DEFT DEFINITIONS

Wedding ring: The smallest handcuff in the world.

Skeleton: A man with his inside out and his outside missing.

Egoist: A person of low taste more interested in himself than myself.

Boss: The man at the office who is early when you are late and late when you are early.

Second marriage: A triumph of hope over experience.

Husband: A person under the impression that he bosses the house, when in reality he only houses the BOSS.

Architect: One who drafts a plan of your house and plans a draft of your money.

Gossip manager: A person with a good sense of rumour.

Secret: Something that is hushed up from place to place.

Tact: The art of refusing a drink without losing.

Narinder Singh Manral, Chandigarh

*THE ABOLITION by Jonathan Schell; published by Picador in association with Jonathan Cape; distributed by Rupe & Co., pages: 170; price: £2.50.

From The Club Desk

There has been a sudden, and heartening, spurt in the activities of CCTimes Clubs all over the country. Under these circumstances, club news is the first item on the agenda. The Nightmare Club, Madurai, conducted many group discussions, debates and quizzes. Four of their members have succeeded in getting appointments and this has raised the prestige of their club (nothing nightmarish about it) in the neighbourhood. The CCTimes Club at NDRI (Karnal) organised a sports quiz. Copies of Gavaskar's Run'n Ruins were at stake. There were GK books for winners of the GK quiz and a dictionary for the winning team of 'What's The Good Word'. A symposium on 'Democracy in India' was organised by the CCTimes Club, Ganjam (Orissa). While the CCTimes Club, Madhubani (Bihar) organised a lecture on 'Creative role of youth in present days'. Another enterprising CCTimes Club from Darbhanga launched an eye-donation campaign under the guidance of A.P. Atri, Programme Manager of TERF. The CCTimes Club cell of the Akhil Bharatiya Vikas Sangathan is actively involved in propagating a conducive atmosphere for students appearing for various competitive exams while the entire Sangathan is engaged in working for national unity, integrity and character.

And now onto the 'Club of the Month'. The CCTimes Club, Vijay Nagar, Jullundur bags it this time. A group discussion on the prevailing system of education was organised by the club which sent us a detailed report of the proceedings too. Excerpts from the report: "The education system of the country is faulty. Most of the so-called model schools are nothing but 'whole-sale depots of education'. Barely 2% of such schools are recognised. Huge sums by way of tuition fee, besides donations, are collected by these schools without any worthwhile attempt being made to impart education. It is now a usual practice for school and college teachers to compel students to join tuition groups run by them. Those who resist are penalised. To curb this malpractice, model schools should obtain recognition either from the Central or state governments; also the government must check the amount collected by these schools. No student should be compelled to join tuition groups. The disparity existing between private and regular candidates while appearing for various examinations must be removed too."

So much for club news. We are still receiving letters asking us what the objectives of these clubs should be. To give such newcomers an idea, here are some proposals laid down by the CCTimes Club at Raviwar Peth, Pune, itself a new arrival: 1. Organise programmes on personality development 2. Open an information bank on career opportunities in India and abroad 3. Arrange programmes to keep your city neighbourhood clean. These proposals should prove to be successful, especially if some teachers or lecturers could be roped in to provide guidance.

And to give you an idea of what type of socially beneficial activities the clubs can organise, the 'Chancellors' CCTimes Club, Allahabad, rendered assistance during the Magh Mela to help and guide visitors and devotees and also guided and controlled vehicular traffic during those days. The club also plans to hold a debate-cum-talent contest for all CCTimes Clubs from UP at Allahabad in June. So, if you have established a CCTimes Club in UP and are keen to participate in this inter-state clubs meet, contact the 'Chancellors' CCTimes Club, 5 Sir T.B. Sapru (and not 'Sapri' as inadvertently published in our February issue) Road, Civil Lines, Allahabad.

By now you must have got a fair idea of the large number of letters we receive from you all. Therefore, please do not expect personal replies to your queries and problems unless they are of a very specific nature. The rest of your problems we'll try to solve through this column itself. Letters enquiring about procedures to form a club, activities, suggestions, and topics will also be dealt with through the column itself. Also, since each club has a long list of members, membership cards henceforth will be issued only to the President and Secretary. And, once again, please quote your club's membership number (if you've been allotted one) in all your correspondence with us.

THE LETTER 'H'

Howrah • 1. CCTimes Club, C/o Bengal Engineering College, Hostel No. 10, Room No. 409, P.O. Botanic Gardens-711 103, Dist Howrah. **President/Secretary** : Mukul Das. **M. No. H-2. Hubli** • 1 CCTimes Club, 'Friends Fountain', 1793/1, 1st Cross, Off: Main Road, Ganesh Peth, Hubli-580 020. **President/Secretary** : K.V. Kulkarni. **M. No. H-3. Hyderabad** • 1. CCTimes Club, B-88, H.A.L. Colony, Hyderabad-500 042. **President/Secretary** : P. Yateesh. **M. No. H-4.** • 2 Young Men's Association, H. No. 2-2-1130/9A, Prashanth Nagar (New Nallakunta), Hyderabad-500 044. **President/Secretary** : T. Srinivas Babu. **M. No. H-4/1.** • 3. CCTimes Club, Room No. 30,

Nagarjuna Sagar Engineering College Hostel, Masab Tank, Hyderabad-500 488. **President/Secretary** : M. Yadagiri. **M. No. H-4/2.** • 4. CCTimes Club, EWSH 145, New Santosh Nagar Colony, Near Saidabad, Hyderabad-500 659. **President/Secretary** : Ravi Kanth Reddy. **M. No. H-4/3.** • 5. CCTimes Club, 2-1-548/3A, Nallakunta, Hyderabad-500 044. **President/Secretary** : P. Girish. **M. No. H-4/4. Hardoi** • 1. Magnum Opus Club, (Under CCTimes Programme), 335, Chouk, Shahabad-241 124, Dist Hardoi. **President/Secretary** : Satish Shrivastava. **M. No. H-5. Hardwar** • 1 CCTimes Club, Or No. 89 & 90, Consultant Type IV, Sector V A, B.H.E.L. Ranipur. Hardwar-249 403. **President/Secretary** : Ravi Shanker Saxena. **M. No. H-6.**

THE LETTER 'I'

Intur • 1. Folks CCTimes Club, Or. No. 12-1B; Intur-522 341, Tenali, Dist Guntur. **President/Secretary** : I. Vara Prasad Rao. **M. No. I/1.**

THE LETTER 'J'

Jabalpur • 1. Khare CCTimes Club, C/o Sri N. K. Khare (ASM), Jalpa Devi Ward, Katni-483 501. **President/Secretary** : S.K. Khare. **M. No. J-1.** • 2. CCTimes Club, M.P.E.B. Colony, Or. No. F-35, Jabalpur-482 008. **President/Secretary** : L.K. Vishwakarma. **M. No. J-1/1. Jaipur** • 1. 'Marubhumi' CCTimes Club, F-29 Madhuvan Colony, Tonk Road, Jaipur-302 015. **President/Secretary** : Sudhakar Soyalkar. **M. No. J-2.** • 2. Progressive Youth CCTimes Club, C/o Diamond Coal Traders, Murgikhana, Agra Road, Jaipur. **President/Secretary** : G.K. Sharma. **M. No. J-2.** • 3. CCTimes Club, D-42 Jyoti Marg, Bapu Nagar, Jaipur. **President/Secretary** : Manoj Sharma. **M. No. J-2/2. Jalgaon** • 1. B.P. Savakhedkar, CCTimes Club, Building A-3, Block 4, Sangam Colony, Jalgaon-425 001. **President/Secretary** : B.P. Savakhedkar. **M. No. J-3/1. Jammu** • 1. CCTimes Club, F-98, Residency Road, Jammu-180 001. **President/Secretary** : Mahesh Abroha. **M. No. J-4. Jaunpur** • 1. CCTimes Club, 15/A Olandganj, Jaunpur-222 002. **President/Secretary** : Sanjay Singh. **M. No. J-6. Jhansi** • 1. CCTimes Club, 165, Larman Gunj, Jhansi-284 002. **President/Secretary** : Rakesh Kumar Misuriya. **M. No. J-7. Jodhpur** • 1. CCTimes Club, 105, Ajit Colony, Jodhpur-342 001. **President/Secretary** : Sanjay Bhandari. **M. No. J-8. Jamshedpur** • 1. CCTimes Club, C/34, B-Block, Sonari, Jamshedpur. **President/Secretary** : Sanjeev Gupta. **M. No. J-9.** • 2 CCTimes Club, Hostel E, E-129, R.I.I. (JSR) Jamshedpur-831 014. **President/Secretary** : Amaresh Kumar. **M. No. J-9/1.**

NEW ARRIVALS

Amritsar • 1. Thrill Seekers Club, 30, The Mall, Hari-Niwas, Amritsar-143 001. **President/Secretary** : Vipul Patel. **M. No. A/4. Arrah** • 1. CCTimes Club C/o Sandeep K. Pandey, Choudhariana, Arrah-802 301, Dist Bhojpur. **President/Secretary** : Sandeep K. Pandey. **M. No. A-5. Amroha** • 1. CCTimes Club, 28, Afghanistan Street, Amroha-244 221. **President/Secretary** : Salahuddin Khan 'Ghazanfar'. **M. No. A-7. Bhilai** • 1. CCTimes Club, LIG Flat 1108, Adarsh Nagar, Industrial Estate, Bhilai-490 026. **President/Secretary** : Vijay Kumar Damle. **M. No. B-18. Coimbatore** • 1. CCTimes Club, C/o N. Mahendran, 21, Visweswarayya Street, Coimbatore-641 025. **President/Secretary** : N. Mahendran. **M. No. C-8/1. Delhi** • 1 CCTimes Club, 52, UB Jawhar Nagar, Delhi-110 007. **President/Secretary** : Nitin Malik. **M. No. D-2/4. Dhanbad** • 1. Ismites Creams, 24, New Hostel, ISM, Dhanbad-826 004. **President/Secretary** : B.S. Mishra. **M. No. D-3/8.**

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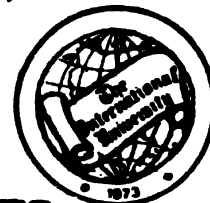
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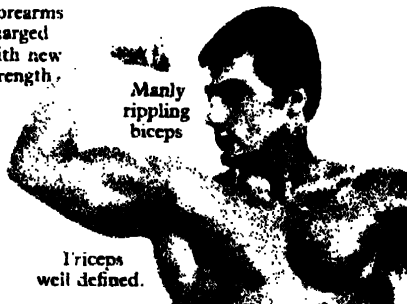
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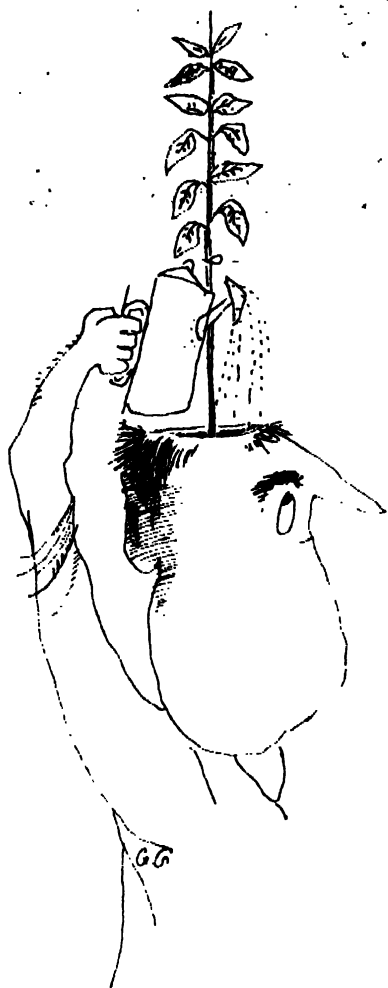
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LETTERS

Who Needs Reservation?

Reservation for the unreserved is needed in India.

E.V. Rama Krishna, Tetali (AP)

Best Letter : Rs 40

Super Power Maniacs

Continuing arms race
Even in space
Innocents will cry
But superpowers will not heed,
Because for them—
'Preparation for war is
the last promise for peace.

Rajeev Ranjan, Barauni

Prize-winning Letter : Rs 25

Another Special

The special issue for IIT, JEC was welcome. Hope you bring out a special issue for Combined Medical Admission Test.

Dharampal Anand, Patna

On Delinking

In this International Year of Youth, delinking degrees from jobs is a welcome proposal indeed. Apart from this politics must also be delinked from the college campuses.

R. Ramakrishnan, Bombay

Year Of Leakage

The year 1985 can go down in the history of India as a year of leakage. Bhopal gas leakage; documents leakage from Delhi to foreign countries, and exam question paper leakage at Nagpur. Many more may follow suit.

S. Suresh Kumar, Nagpur

Place In History

He, who sacrifices his own life for the sake of the nation, covers only half a page of History. On the contrary, he, who causes the death of thousands of people, covers hundreds of pages of History.

J.P. Gadya

Distt. Balangir (Orissa)

Rats And China

The Indian media has failed to convey the significance of China's drive against rats, in the recently concluded 'Fat Year' in China. During the year-long extermination drive against rodents, almost five times, China's human population, millions of packets of rat poison were distributed, and hundreds of men and women were trained to catch rats by driving them out of their hideouts by making mating calls. This resulted in considerable liquidation of rat population.

In India about 25m tonnes of foodgrains are destroyed every year by rats—not to talk of the pillage and plunder the rats commit in open fields, godowns, shops and elsewhere. Prompt measures have to be taken to control this menace and arrest the colossal destruction of foodgrains.

V.K. Bhan, Srinagar

Uniform Standards

The upper age limit for the UPSC Assistant's Grade Exam 1985 for certain categories of departmental candidates such as LDC/UDC/Steno Gr 'D', is relaxed

only upto 30 years. While the upper age limit for departmental candidates in all other competitive exams conducted either by UPSC or SSC is 35 years. The UPSC should revise its decision and raise the upper age limit for the Assistant's Grade Exam 1985.

Luxmi Narayan, Delhi

Sethia's Generation

With reference to the 'Sethia scandal' (*Current Events: National*, Apr '85) there is a proverb that "one generation makes the bubbles and the next generation breaks them." I wonder to which generation Rajendra Sethia belongs.

B. Gangadhar, Rajendranagar

UN Rechristened

The UNO, on the eve of its 40th anniversary, may be renamed as the 'Union of Neglected Optimists'.

Alok Misra, Lucknow

Nationalists Not Terrorists

I was shocked to read in your April issue the word 'terrorists' for Bhagat Singh, Chandrasekhar Azad etc.

These people were nationalists and not terrorists and they sacrificed their lives for the sake of the freedom of their mother land.

R.K. Singh, Dhanbad

Philosopher Kings

It is unfortunate that in some countries including India, ignorance and political pomposity is ruling and political leaders and bureaucrats have become demigods, even in this computer age.

Today the world needs philosopher kings; and let us make them our leaders so that we may establish universal peace, justice and prosperity.

R. Surendranath, Nellore

Rot In Banks

If the rot that has set in the banking industry is to be eradicated, it is essential, as a first step, to restore the authority and autonomy of the RBI.

The responsibility of exercising supervision over the banking system of the country should be shouldered by the RBI and the government would do well to refrain from issuing instructions to banks directly.

S.V. Patankar, Jabalpur

On The Hit List

We hear about several VIPs being on the list. Why don't we keep some very important problems (VIPs) like poverty, communicable diseases, corruption etc on the hit list?

Karamcheti, New Delhi

Philosophy of the 21st Century

Promise not; Hope not; Wish not; Pray not

D. Chattanathan, Tirupati

CA Stipends

With reference to financial assistance for CA students (*Career Counselling*), the following information may be useful.

The monthly stipend paid to articled students/audit students by the chartered accountants firms at present, are as follows: (a) In metropolitan cities like

Delhi, Bombay, Calcutta, Madras etc. Rs 200 in the first year; Rs 300 in the second year; Rs 450 in the final year. In other cities it is Rs 100, Rs 150 and Rs 225 during the first, second and final years of training respectively. (b) If a student passes the Intermediate exam within the stipulated period (i.e. within two years of training), he may join industrial training for the remaining period of articleship (one year) at a substantially higher rate of stipend, ranging between Rs 500 to Rs 1200 per month, depending upon the industry concerned.

For further details you may contact the Secretary of the Institute at New Delhi; Ph. 279211 and 274446.

Anil Kumar, Samastipur

Scoring Point

Making The Right Moves (Apr '85) was an invaluable gift to the younger generation. This is where your magazine scores over other 'competitive magazines'. You provide the method of reaping rich harvest from the fields well before the season commences.

Jitendra Kr Sinha, Pilani

The Real Terrorists

With reference to *Insurgency On The Rampage* (Mar '85), who could be a bigger and bloodier terrorist than either of the super powers, who arm themselves to the teeth with savage nuclear arsenals and hold the entire earth and its innocent people, at gun point? The two superpowers are the biggest and the most heinous terrorists of our times.

V.M. Manoj, Trichur

On Rajiv

Francis Bacon said—"If a man will begin with certainties he shall end in doubts." Mr Gandhi has started with certainties and one only hopes he will prove Bacon wrong.

P.K. Sahoo, Distt. Surguja (MP)

Very hurriedly Mr Verma came to the conclusion that 'Rajiv is India's man of destiny' (*Rajiv : His First Hundred Days*). Time and problems decide the dynamism of the leader. Though Rajiv is set to take India into the 21st century, he should be given a helping hand by the Opposition and petty interests of the parties have to be given up. Then alone will ruling party and the Opposition use to the expectations of the masses.

Sunil Ranjan, Delhi

The lottery seller at the street corner gives Rs 60 to police, Rs 30 to traffic police and Rs 30 to municipal workers as hafta for the month. Mr Clean are you listening?

Urmilla Ramrakhiani, Bombay

The Price Of Deception

V.K. Sinha from Varanasi has rightly pointed out the republication of the prize winning letter titled *History Repeats Itself* (May '85) by D.K. Chanchal, Gaya. A similar letter by T. Mundargi was published under the heading *Mughal India* (Jul '84).

While accepting our inadvertence in this matter, we are withdrawing the prize awarded to D.K. Chanchal.

Mexico Rocks...



Police, the word and the uniform which generates security and confidence in developed countries, generates terror and fear in India. There have been many cases when the police have blundered and plundered but what happened in Ahmedabad (Gujarat) on Apr 22 was the most shameful part of police history. On this day the police force led by some police officers, degenerated into a gang of hooligans on the rampage: firing as they desired, destroying and looting property, assaulting, abusing and striking women—young and old—and parading naked before them.

If this were an isolated, stray case of the expression of police indignation, one would not have worried. It was involved in the past, in the Kolnathli atrocities, the Maya Tyagi rape case, and in the Bhatnagar blindings. To quote a few examples. Not only that, the police discipline is going downhill. Last year, the Calcutta police jawans abused their officers in public when they refused to hand over 34 persons arrested in the Mehta murder case.

The police behaviour in public has been so bad that the police and the government have lost all respect. In Ahmedabad paraded the women, and paraded them in the streets.

Why did this happen? Why the police behaves in a barbarous way is to be analysed. The major factor which makes the police hot-headed is political support. It was openly visible when the Union Home Minister justified police behaviour in the Lok Sabha and the state government described it as an effort to curb the forces of

The police have become highly personalised and have started believing in taking revenge. In a democracy, agitations and demonstrations are a part of the game and the police always tries to handle them. In England, the police do not harm but control the crowd effectively. In other countries too, the police face hostile, at times aggressive, crowds, but seldom take revenge on bystanders and those confined to their homes. In India, the police have developed a habit of teaching people a lesson by destroying their property and physically harming them.

The police have also acquired economic power. That the police force is highly corrupt and earns a lot of black money is accepted even by the policemen. To utilise this easy money, which is enormous in many cases, the police have to find ways of investing it.

The police force has also become lawless and the regard for officers and senior persons does not exist. Officers have been abused several times, and nothing much has been done against them because of trade unions which are known as welfare associations among policemen.

Because of all this, the police do not believe in protecting citizens properly. They believe in maintaining an authority over them. The government expects it from the police and the police very loyally provide this service to the government. No doubt, the police have become like the Nazi Gestapo, Czarist Ocranas, the Soviet's Chekas and Mussolini's Ovrass.

Though much is said against the police, people hardly know the conditions in which they live and work. The constable, the keizer of the entire police system, is considered a Class IV employee, very much akin to a peon or a watchman. Senior police officers and politicians treat a constable like a domestic servant and never care for his welfare and for the welfare of the family. The higher echelons of the police are also not satisfied because they do not come with police objectives in mind but come because of money and a title. They do not have social commitment and always look towards job transfer for better placement and promotion. Many voluminous reports have been written on the need to improve the working and living conditions of the police personnel but not much has been done.

The major problem for the police is political interference. A study, of six states conducted in 1983 shows that 82% of all sub-inspectors, 69% of inspectors, 90%

of deputy-superintendents and all superintendents had to put up with political interference. The Punjab Police Commission way back in 1961-62 accepted that the members of the political parties interfered continuously in the working of the police for unlawful activities. In 1971, the Tamil Nadu Police Commission also accepted that the problem of political interference was increasing over the years. In UP, 81% from a selected group of 4 000 persons singled out political interference as the biggest single cause for the misuse of police power.

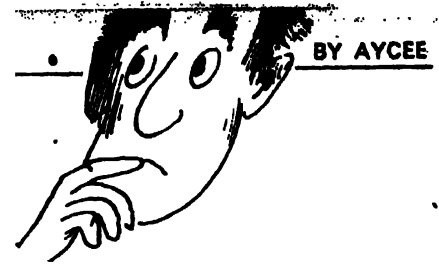
The police in a democracy, and that too, in a welfare state, have to be a force for protecting the people. Better police-community relationships must be promoted so that the police and the people have faith in each other and organised violence by the police must come to an end. Two things are very necessary to reform the police force. Firstly the Police Act of 1861 should be changed. The Act defines policemen as the servants of the government and not of law. The Act should be modified keeping in view the modern requirements of a democratic society.

The second and the most important thing is that the police must be trained in a different way. The entire training should be based on the hypothesis that the crowd is not an enemy but a fellow citizen who has to be kept under control. The force used should be minimum and the situation should be handled tactfully. The Japanese riot police force (kudotai) is trained to develop patience under utmost pressures, and in the face of verbal provocation. This would make a policeman not only a good law officer but also a moral officer. Nengai used to advise the police officers "never to shout, never to run about, never to get excited because the excitement might infect the crowd".

We have been talking about the relationship among the police, people and the politicians since 1947. Today, unless the human element of the police force is revitalised, better training provided and the police equipped with less lethal weapons, the police force might turn out to be a ruthless instrument of exploitation. The sooner it begins, the lesser would be the damage to the society, in the 21st century.

R. K. Sharma

TEST YOUR WORD POWER



The per-fect WORD. Is it on the tip of your tongue or is it hidden in the back of your mind? Either way, we agree, it's an eloquent problem.

And so each month we bring you this column, tailor-made to suit your requirements. Twenty new words complete with their meanings and usage.

But what's so unique about *our* word power exercise? The 20 sentences are information-packed and fact-laden—facts which are often not easily available. A weighty two-in-one package, wouldn't you agree?

Take the word or phrase you believe is *nearest in meaning* to the key word.

1. **adjunct:** A. something right next door B. something omitted that is to be added C. something that comes to mind afterwards D. something extra but subordinate
2. **apt:** A. exact B. latest C. well-suited D. brief
3. **cavern:** A. inn B. underground chamber C. underground passage D. deep opening
4. **chew:** A. to grind with teeth B. send out from the mouth C. break into parts D. cut into pieces
5. **cohort:** A. companion or follower B. business partner C. a person accompanying another to give protection D. life partner
6. **concoct:** A. to prepare by mixing together B. change from one form to another C. think about D. perform clever tricks
7. **deplore:** A. to regret B. expel C. insult D. reduce to a lower rank
8. **dubious:** A. uncommon B. questionable C. unimaginative D. unreliable
9. **farce:** A. indirect remark B. absurd and useless proceedings C. deception D. something difficult to understand
10. **frugal:** A. unprepared for B. unimportant C. economical D. apprehend
11. **heap:** A. to pile B. furnish C. reach a peak D. pay attention to
12. **incinerate:** A. to burn to ashes B. make a cut in C. strip off D. test out
13. **lucre:** A. good fortune B. profit and ends C. Indian currency D. monetary gain
14. **oblivious:** A. hidden B. unaware C. crazy D. out of date
15. **Overwhelm:** A. to engulf B. exceed the strength C. go beyond D. decide against
16. **proselytise:** A. to convert B. start legal proceedings against C. do well in life D. put forward a suggestion
17. **sloth:** A. laziness B. activity C. carelessness D. deep sleep
18. **stew:** A. to cook slowly B. break into pieces C. err D. become dull
19. **vendetta:** A. a weapon B. a fast dance C. crest D. a feud
20. **woe:** A. risk B. lament C. trouble D. disliking

(Answers on page 64)

THOUGHTS

Here's some food for thought... provided you pause to ponder over it. These passing thoughts on various social, political and economic issues, expressed by a few observant minds, often portray the bare realities of life. They may even set your thought processes in motion!

What kind of freedom of the press exists in family-owned empires where the proprietor-editor dictates the reports to his editor, fixes the number of people in public meetings and can even dream up the number of stones hurled?

V. Gangadhar, *Sunday Observer*

A newspaper is the mirror of the society.

The press is generally the favourite whipping boy of politicians who happen to get caught in a vicious circle of their own making.

Hari Jai Singh, *Indian Express*

All things are subject to time; and everything is destroyed by time. Time

alone is real.

Krishna in *The Gita*

A Nagpur informant to sociologist Kathleen Gough: "When I put on my shirt to go to the office, I take off my caste, and when I come home and take off my shirt, I put on my caste."

In the past year (1984), about 1,00,000 people have been fined for spitting in Beijing..

The Herald Review

"Everyone is living off the system with no one investing in it."

Rajani Kothari

Politics is the game of free men. Its existence is the test of freedom.

Bernard Crick in *In Defence of Politics*

The framers of the Constitution assumed that political parties would grow and work the Constitution. That assumption has been belied.

The Herald Review

Each (political party) represents special interest and none has cared to build a credible coalition of special interests which makes for 'the national alternative'.

The Herald Review

It is often said that only crooked and wars bring India together.

India Today

The right to know is like the right to life. It is fundamental and unconditional in its assumption that knowledge like life is a desirable thing.

Bernard Shaw

The excise is not coming tumbling out faster than a computer print-out.

India Today

QUOTABLE QUOTES

Culture being a pursuit of our total perfection by means of getting to know, on all matters which most concern us, the best which has been thought and said in the world.

Matthew Arnold

Even God cannot change the past.

Agathon

A perfect tragedy is the noblest production of human nature.

Joseph Addison

Men in great place are thrice servants: servants of the sovereign or state; servants of fame; and servants of business.

Francis Bacon

Undergraduates owe their happiness chiefly to the consciousness that they are no longer at school. The nonsense which was knocked out of them at school is all put gently back at Oxford and Cambridge.

Max Beerbohm

I do most of my work sitting down; that's where I shine.

Robert Benchley

I tell you, hopeless grief is passionless.

Elizabeth Barrett Browning

Perfection when you get used to it is just as incredible as optimism.

Julien Benda

It is the common wonder of all men, that, among so many millions of men, there should be none able.

Thomas Browne

An event has happened upon which it is difficult to speak, and impossible to be silent (on the French Revolution).

Edmund Burke

But to us, probability is the very guide of life.

Bishop Joseph Butler

An art can only be learned in the workshop of those who are winning their bread by it.

Samuel Butler

Friendship may, and often does, grow into love, but love never subsides into friendship.

Lord Byron

One gives nothing so freely as advice.

Duc De La Rochefoucauld

Immodest words admit of no defence. For want of decency is want of sense.

Earl of Roscommon

FOCUS

SRI LANKA

REIGN OF TERROR

BY SANJUKTA BANERJEE

Political solution or a military solution—is that the question? If it is, the problem would be relatively simple and could be solved, given a reasonable amount of time. But, as the months roll by, the issue is becoming more and more complex and is acquiring dimensions that it did not have before: the ethnic strife, Indo-Sri-Lankan relations, the superpower connection, an emerging power struggle in Sri Lanka and a shattered economy. Each of these have multifaceted dimensions and it will be difficult, indeed, to regain the island paradise.

The racial problem in Sri Lanka (*CCT*, Nov '84) dates back many centuries and stems from a popular feeling among the Sinhalese that though they are a majority, the Tamil minority dominates educationally and economically. But, as often happens, this has been slurred over by race. According to mythology, the Sinhalese are the "chosen race" of Lord Buddha and the Theravada form of Buddhism practised in the island is the purest form in the world. The Sinhalese also feel that Buddha's language—Sinhala—which has deep Sanskrit origins, has to be protected in the island, where they are isolated, and if they were to be driven from Sri Lanka, they would find a haven nowhere, unlike the Tamils, who have 50m Dravidians across the Palk Strait. Some Sinhalese have begun to draw parallels between their community's situation and that of the majority Greek Cypriots, who face a hostile Turkish minority in Cyprus, with Turkey only miles away. Some also draw parallels with Northern Ireland where the majority Protestants confront the minority Catholics with Catholic Eire just across the border.

While the British followed a divide-and-rule policy in colonial Ceylon by pampering the Tamils, after independence the Sinhalese tried to "correct" the situation through the passage of such acts as the Citizenship Act, which made most of the Indian Tamil plantation workers members of a stateless community, and the 1956 Sinhalese-Only Act, which made Sinhala the official language. In the 1970s, a "standardisation" system was introduced by which Tamil students had to gain higher marks than their Sinhalese counterparts to qualify for university admission.

Meanwhile, the Sinhalese politicians pandered to the basic fears of the community and raised the Tamil bogey off and on, bringing the situation to a crisis in 1983, although the Tamil United Liberation Front (TULF), a Tamil political organisation, perceived the ebbing position of the Tamils much earlier and had called for a separate Tamil state as early as 1976. In July 1983 the Pandora's box of racial hatred burst and the story is too well known to be related here.

There is a feeling across the Palk Straits that President Junius Jayewardene, had he tried to do so, could have nipped the problem in the bud in the capacity of a President and as commander of the Sri Lanka Armed Forces. But the issues snowballed and even today National Security Minister Lalith Athulathmudali is allowed to make incendiary statements like "we (the Sinhalese) are faced by an enemy who does not want to talk to us, an enemy who wants to kill all of us."

Peace Package

In December 1984, it appeared that Jayewardene was sincerely making an effort towards a political solution. He proposed a peace package, which was essentially a form of participatory democracy, involving a four-tier system of village councils, area councils, district councils and (inter-district) provincial councils. The last were supposed to be a concession to the Tamils who have been pressing for the linking of the predominantly Tamil Northern province with the Eastern province which has a mixed population of Tamils, Muslims and Sinhalese. The President also proposed a second chamber of 75 members, to be styled the Council of States. Fifty of its members were to be chairmen and vice-chairmen of the district councils. But under pressure from the majority Sinhala Buddhists, Jayewardene dropped the draft bill. In a speech to Parliament, the erstwhile industries minister Cyril Matthew, who is an extremist demagogue and a champion of the Buddhists, kindled xenophobic sentiments: "If these demands are granted, what will happen to the majority Sinhala community which is 74% of the entire population of the country? They will be compelled to retreat to Dondra, the southernmost tip of Sri Lanka and thereafter jump into the Indian Ocean."

Such chauvinistic statements reflect another side of the problem in Sri Lanka. The President, who came to power in 1977 is now 78, and has three more years of service left in what is his last term as President. There is also some speculation whether he will physically last out these three years. Under the circumstances, a power struggle is very much in the murky shadows that make up Sri Lanka politics. What appears to the

majority community at this stage is anti-Tamil sentiment, and it is not surprising that no really serious effort is being made to solve the issue. The would-be successors are Athulathmudali, the Minister for Lands and Land Development, Gamini Dissanayake, the Prime Minister Ranasinghe Premadasa, and Matthew and all of them make "more Sinhalese than thou" statements to gain the support of the majority community. It suits Jayewardene to sit back and watch them fight it out. Some Colombo analysts suspect that he has his own candidate in the wings. Like so many dictatorial leaders of state, he wants a family member to succeed. In this case, the Education Minister, Ranil Vikramasinghe, who has married into the family.

Opposition Nil

Political opposition is virtually nonexistent. The once-formidable Sri Lanka Freedom Party (SLFP) of Bandaranaike, is discredited and in complete disarray. However, there is a dim hope for the future in a breakaway faction of SLFP led by Bandaranaike's son-in-law, Vijai Kumaratunge, the Amitabh Bachchan of Sri Lankan cinema. Recently he stated at a meeting, "If Gautama Buddha were to come to Sri Lanka tomorrow he would be asked for his identity card. As an Indian, he wouldn't have one and would then be hauled off to the nearest police station and remanded as a terrorist." On the whole, however, such sentiments have not yet drawn popular political support.

Meanwhile, the Sri Lanka army has emerged from its 30-year-old ceremonial role in the parade grounds to international attention. Universally acknowledged to be one of the worst and most indisciplined in the world, it has become a Frankenstein's monster. Significantly, the top brass, who have so far exercised little control over their men, have become ambitious since they have been given a blank cheque in the Tamil-dominated areas and are accountable to nobody. The army's strength had doubled from 16,000 in 1982, and according to some analysts, the ground is just fine for an eventual army takeover. This would perhaps sound the death-knell for the Tamils in Sri Lanka, who are already facing acute terrorism at the hands of the army.

Several Tamils are killed everyday and stories of children burnt alive in gunny bags, women gang-raped, young men kidnapped and killed, pregnant women disembowelled are a dozen a penny. The rationale behind such atrocities is that all these people are terrorists. In fact, the terrorists belong to the Liberation Tigers of Tamil Eelam (LTTE), while the majority is in fact a non-violent. But, as a result of the attacks on Tamil civilians, even the moderate TULF is now pressing for closer

DISMAL DEVELOPMENTS

Even in 1985 the Sri Lankan Government and the Tamil militants are showing no signs of veering off the path of confrontation and collision. The result: violence continues to rock the tiny island nation leaving in its wake a trail of butchered bodies—mostly Tamil.

The past four months have been characterised by dismal developments. Reports of continued atrocities on the 2.5m Sri Lankan Tamil minority are pouring in ceaselessly. The Tamils are fighting for their lives with their backs to the wall trying to ward off a two-pronged attack from the 12m strong Sinhalese majority who have turned antagonistic and an utterly disciplined, trigger-happy Sri Lankan army gleefully dabbling its hands in the blood of innocent victims.

The Sri Lankan Government's intention to abandon the search for a political settlement of the problem was made abundantly clear in January '85 when plans to settle 30,000 Sinhalese families in the predominantly Tamil north were finalised. For this, 250 Sinhalese families would be selected from each of the Sinhalese constituencies for resettlement in the northern province. The plan was in total violation of the promise made by the Sinhalese leaders in November '83 in Annexure 'C' viz. that the demographic pattern of the northern and eastern provinces would not be upset by the colonisation policy. And, as if this was not enough for the Tamils, it was decided that the new settlers would be given military training and provided with arms and equipment. That Colombo is also bent upon damaging cordial relations with India has been demonstrated in no uncertain terms, time and again. President Jayewardene is blaming India for what is essentially his internal problem by accusing it of harbouring Tamil separatists and allowing the setting up of training camps for terrorists. But, even in the face of this blatant provocation, India has kept a remarkably cool head, despite the fact that the Tamil issue in Sri Lanka is having widespread ramifications in India which now has on its hand the ever increasing problem of Tamil refugees coming in from across the Palk Strait. PM Rajiv Gandhi is keen on finding a political solution. He has ruled out Indian military intervention in Sri Lanka to liberate the Tamil majority areas, stating emphatically that a "Bangladesh type liberation of Tamil areas" does not arise.

President Jayewardene, on his part, is setting the stage for a military solution. Firstly he brought an end to the All Party Conference and put the blame for sabotaging the talks on the Tamils and more specifically on the Tamil United Liberation Front (TULF), the main representative of the Tamil minority in the island-nation. He has refused to have any further talks with TULF "as long as they advocate separatism". Then he has already quadrupled the arms budget from \$45m in 1982 to \$200m in 1984. The security budget has been increased five times and a programme has been launched to beef up the defence forces by the induction of new armaments and the strength of the army is being doubled by inducting 2,000 recruits every two months and by reducing the training period from four months to eight weeks.

For the acquisition of arms Colombo is frantically looking around for sympathetic suppliers to aid its cause. It has managed to obtain arms from UK, China and Israel, to name a few important nations. The British and the Israelis are also helping to train the Sri Lankan army. The UK has provided naval gunships and small arms but has been quick to point out that this has been done on a purely commercial basis so as not to jeopardise its relations with India. Jayewardene also suffered slight at Mrs Thatcher's hands when she turned down his plea to keep British troops stationed in his country in order to "sustain democracy". But what is perhaps most surprising is the fact that the US has denied Sri Lanka's request for a military assistance to the tune of \$100m because of continued violation of civil rights in Sri Lanka.

That these antagonistic moves are only going to worsen the situation in Sri Lanka is evident from the fact that the agitating Tamil militants have now joined forces against the oppressive measures of the Jayewardene government. They have finally decided to widen and strengthen their base and the Liberation Tigers of Tamil Eelam (LTTE), the Tamil Eelam Liberation Organisation (TELO), and Eelam Revolutionary Organisation (ERO) will henceforth fight for the Tamil cause under a collective banner. But, whether the Tamils ultimately succeed in obtaining an Eelam nation of their own or whether the Sinhalese, with the backing of the Sri Lankan army, are able to inflict upon them a lasting reign of terror—only time will tell. J S.

that the Sri Lanka Government's strategy is to wear out the militants. According to TULF Secretary General Appapillai Amrithalingam, "If some semblance of unity is achieved, that can only mean that the war of attrition will escalate, rendering the dim prospects of a political settlement of the problem even dimmer."

The indiscriminate killings of the Tamils has led to an exodus of Tamils from Sri Lanka to their ancestral home, Tamil Nadu. And it is this which has brought India sharply into the picture. Parallels are drawn with the Bangladesh situation in 1970-71 and it has been hinted in many circles that India will take steps similar to the ones taken in December 1971. Although the PM Rajiv Gandhi has dismissed such suggestions, there is a growing feeling among the Tamil refugees that India should "help" them.

The Problem

Sri Lanka's internal problems have suddenly become an internal problem of India. Every refugee is being fed at state expense for a few days and each one is being given two sets of clothes, a hurricane lantern, basic utensils, a mat and a blanket (valued at Rs 650 per person). Fortnightly dopes of Rs 55 for the head of each family and Rs 27.50 for each additional member (less for children) are also being given. Special ration cards under which rice is available at 57 paise a kilo (market price Rs 3.50 a kilo) and firewood at 40 paise a kilo (market price Rs 3.00 a kilo) have all been issued. Not only is this a huge drain on India's economy, but a number of the country's own vagabonds have joined the band-wagon and are passing as refugees.

And as if this were not enough, India has been made the bete noire of Sri Lanka. It is very much the in-thing to be anti-India in Sri Lanka. The Sri Lanka Government has accused India of harbouring terrorists, providing them with refuge, conducting training camps, and providing them with weapons to be directed against the government. Although the Sri Lanka Government is beating up this xenophobia to divert attention from the genocide that is going on in its own country, it has had the effect of triggering off a cold war between India and its neighbour across the Palk Strait. While the former PM Indira Gandhi's stand was well-known, Rajiv Gandhi's appointment led to much speculation about India's stand. The cold war, in fact, has been blowing hot and cold over the last few months. When Rajiv was on his campaign trail in December the Sri Lankan authorities were dismayed at his statements accusing Sri Lankan troops of "indiscriminate killings". But, after the election, the PM was much softer towards

(Continued on page 67)

Should Indian states remain organised on a linguistic basis?

One of the problems faced by the Indian union, soon after independence, was that of integration of some 500 and odd princely states. The successful and peaceful welding together of these princely states can be rated as an outstanding achievement of our political leadership. But the principle underlying state reorganisation has often been questioned. Linguistic affinities for determining state boundaries was a favourite subject even during the pre-independence period. Since the idea has popular support many of the political leaders joined the bandwagon and demanded that political units be divided on a linguistic basis. The Congress Party was ambivalent on this issue and Pt Nehru wanted to wait a little before mapping out the political units. But the pressure on the Indian Government was enormous and in 1953 a committee was formed under Fazal Ali to study the question of state reorganisation. The report of this committee recognised that linguistic homogeneity was an important factor in the formation of states. In 1956, the State Reorganisation Act was passed and 14 states and six Union territories were created.

The events, after nearly three decades of formation of states, have necessitated an enquiry into the usefulness or otherwise of the reorganisation. It's high time we considered whether linguistic states have succeeded in forging a sense of national integration or given a fillip to regionalism and sub-regionalism—factors which endanger the unity of the country.

For

■ The advocates of linguistic states point out that such demarcation of territorial units is in keeping with the spirit of the Constitution. This measure is said to provide a sound footing for building up the democratic way of life as well as for socio-economic progress of the country. It is a gross libel to interpret linguistic states as a threat to national unity because language acts as a great unifying factor.

■ A state, which is being administered in the language of its people, makes them aware of the working of a democracy and the need to participate in it. An efficient and easy running of the state administration, its educational institutions and cultural activities in the state is ensured by such a demarcation of states. Thus the principle adopted for the formation of these political units is very sound.

■ The linguistic reorganisation of states was the best arrangement obtainable in the conditions prevalent in the '50s. Since this idea had mass appeal, adoption of any other principle for creation of states would have caused great confusion and chaos in the country.

■ India is also naturally divided on the basis of linguistic areas and the major language areas are not too many. Individuals speaking the same language and inhabiting a particular area, in spite of being loyal and devoted to the country, have certain affinities and would like to lead their own lives. Therefore, language can be the basis for drawing out state boundaries.

■ State reorganisation is regarded as a clearing ground for national integration. Since the Centre has recognised the cultural identity of areas and their language, the states, though self-conscious, are willing to consider themselves a part of the whole, of India. Therefore, linguistic organisation of states has paved the way for smooth Centre-state relations and has strengthened the forces of unity in the country.

■ The development process in the country over the last three decades has resulted in imbalances amongst the different regions. Under such circumstances language provides an excellent rallying point for states to mobilise people and helps them express their specific grievances.

■ The formation of linguistic states is not in the interest of any particular class alone but benefits all segments of society equally and has relevance for the working class as well as the peasantry. By bringing the capitalists and the proletariat together, linguistic formation of states leads to social harmony which positively contributes to the well-being of the nation.

Against

■ National unity has been weakened by the emphasis on local culture and language which linguistic organisation necessarily entails. Often passions aroused by regional chauvinism grip the minds of the citizens resulting in unnecessary violence.

■ The demarcation of linguistic states has hampered the economic development of the country. As one state resents the use of its resources for the benefit of other states, long-term projects involving adjoining states are difficult to undertake. Moreover, efficient workers not conversant with the local language get ignored. Sometimes inefficient people occupy top positions solely on the strength of their familiarity with a language, which is partly responsible for the failure of state administration. The experience over the years clearly reveals that meritorious candidates have often been neglected, which has resulted in chaos during an exigency.

■ The increasing inter-state disputes witnessed since independence have mainly been the result of artificial walls created by linguistic organisation of states. Intolerance for anything other than local sentiments, languages and culture has led to numerous river water disputes. The Karnataka-Maharashtra border dispute is an example of the loyalty for regional feelings at the cost of national prosperity. Thus, the measure poses serious problems for nation building and smooth working of federal institutions.

■ In modern times the social mobility of the people has increased. Since these people are unable to speak the local language of the state they migrate to, the linguistic majorities often attempt to dominate them. In some states problems have cropped up mainly due to the efforts of the majority to force these 'outsiders' to submerge their language and culture. This has assumed dangerous proportions thereby threatening the strength of the nation.

■ The creation of linguistic states has strengthened the hands of regional bourgeois elements. To prevent any threat to their own interests, power and position, these elements float the bogey of the regional language and culture. Therefore, such a principle of redrawing states has led to widespread schism in class relations.

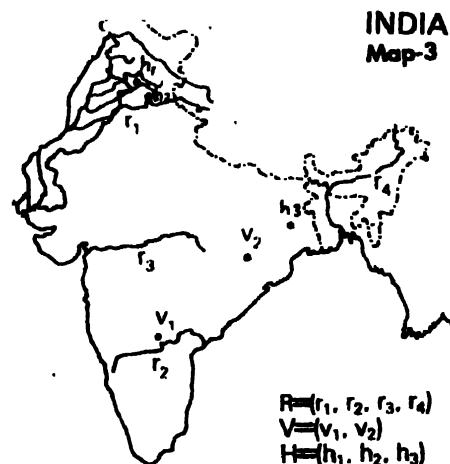
■ The creation of linguistic states has affected smooth administrative relations between the Centre and states. Since the Centre has to correspond with the states, sometimes in the regional language of the state concerned, the administrative cost goes up. Thus, from the point of view of administrative convenience also linguistic states are quite unsuitable.

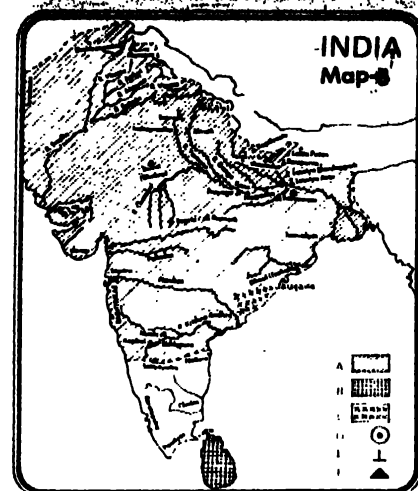
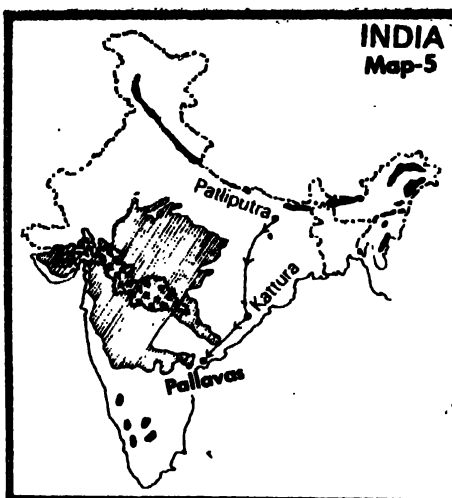
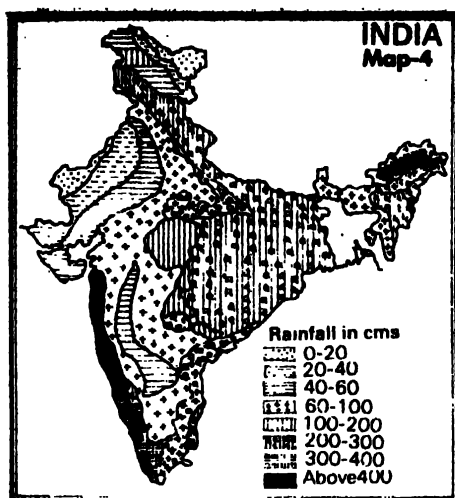
■ The creation of linguistic states has reinforced regionalism and has stirred demands for increased state autonomy. In some cases this obsession for greater state autonomy is so strong that the states threaten to secede if such demands are ignored.

A map is a useful and interesting way of studying various features of a place. In this part, the interpretation of maps has been taken up on the pattern of questions asked in competitive exams. A map may depict various aspects of a particular phenomenon for extensive study, or one or various aspects of different phenomena which may or may not be correlated to each other. In the exams, generally, a map is shown with some correlated and some different features; and on the basis of this information depicted, objective-type questions are asked. This has been illustrated in the following six maps. All you have to do is to study the maps and choose the correct alternative from the choices provided.

- In Map 1, if A represents Union territories (a_1, a_2, a_3, a_4), B represents ports (b_1, b_2, b_3, b_4) and C represents capitals of Union territories (c_1, c_2, c_3, c_4) then
 - A = Delhi, Lakshadweep, Dadra & Nagar Haveli, Mizoram
B = Bombay, Cochin, Paradip, Visakhapatnam
C = Hyderabad, Calcutta, Itanagar, Srinagar
 - A = Delhi, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Goa, Diu & Daman
B = Bombay, Mangalore, Visakhapatnam, Paradip
C = Hyderabad, Calcutta, Itanagar, Srinagar
 - A = Delhi, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Mizoram
B = Bombay, Cochin, Visakhapatnam, Paradip
C = Hyderabad, Calcutta, Itanagar, Srinagar
- In Map 2, the shaded portion represents
 - Coal bearing strata
 - Steel industrial belt
 - Oil bearing strata
 - A particular type of soil
- In Map 2, if a is an oil-field, b is a coalfield, c represents iron ore deposits and d shows oil bearing strata, a, b, c, d respectively are
 - Barauni, Jharia, Singhbhum, Bombay High
 - Cambay, Singhbhum, Narnaul, Bombay High
 - Digboi, Jharia, Singhbhum, Bombay High
- In Map 2, if AAA, BBB and CCC are the three South Indian kingdoms, then BBB, CCC, AAA respectively are
 - Cholas, Cheras, Pandyas
 - Pandyas, Cheras, Cholas
 - Pallavas, Pandyas, Cheras

- Pandyas, Cheras, Pallavas
- Read Map 3 carefully: If R represents rivers, V represents river valley projects and H represents hydel power projects and if $A = (r_1, v_1, h_1)$, $B = (r_2, v_2, h_2)$, $C = (r_3, h_3)$ and $D = (r_4, v_1, h_2)$ then
 - A = Sutlej, Nagarjuna Sagar, Joginder Nagar
B = Tungabhadra, Hirakud, Bhakra
C = Narmada, Mayurakshi
D = Brahmaputra, Nagarjuna Sagar, Bhakra
 - A = Beas, Nagarjuna Sagar, Bhakra
B = Krishna, Hirakud, Joginder Nagar
C = Tapi, Mayurakshi
D = Brahmaputra, Nagarjuna Sagar, Joginder Nagar
 - A = Ravi, Nagarjuna Sagar, Rana Pratap Sagar, Bhakra
B = Cauvery, Hirakud, Joginder Nagar
C = Mahanadi, Mayurakshi
D = Brahmaputra, Rana Pratap Sagar, Joginder Nagar
 - In Map 4 annual average rainfall is shown by different shades. The area depicted by a a a ... represents the crop
 - Rice
 - Wheat
 - Jute
 - Sugarcane
 - Either (i) or (ii)
 - None of the above
 - In Map 5 the shaded area represents a particular type of soil on which a particular crop a a a ... is grown in some parts. The type of soil and crop respectively are
 - Alluvial soil and cotton
 - Red soil and cotton
 - Black soil and cotton
 - Black soil and jute
 - Laterite soil and jute
 - In Map 5, the blackened patches depict general vegetation of the type of
 - Moist tropical evergreen semi-evergreen
 - Tropical dry deciduous
 - Tropical thorn
 - Tropical deciduous moist





- v) Wet temperate
vi) Dry temperate with grasslands
9. In Map 5, the path shown by the arrows(→ →) was the route taken by a famous king of Ancient India, on his campaign to south. This famous king was called by the famous historian V. Smith as the Napoleon of India. This king was
- Chandragupta
 - Samudragupta
 - Asoka the great
10. Carefully study Map 6. The area shaded as A was the empire of a very great king of India. Identify the king.
- Asoka
 - Samudragupta
 - Harshavardhana
 - Akbar
 - Kanishka
11. The area shaded as B in Map 6 during that king's (refer to previous Q) time, i.e., 250 B.C., was known as
- Sri Lanka
 - Ceylon
 - Samudradweep
 - Tamraparni
12. The area shaded as C in Map 6 represents the battle place where a famous king of India fought a war in 261 B.C. After he won the war, his heart was filled with remorse and he pledged not to fight again in his life. Identify the name by which the place was known then and its present name.
- Pur and Puri
 - Kalinga and Orissa
 - Purushapura and Orissa
13. In the same map D represents the capital of this great king of Maurya dynasty. The capital was
- Palimbothra
 - Kusumdhwaja
 - Rajgir
 - Patliputra
 - Patna
14. In Map 6 E represents
- Rock edicts of Asoka
 - Pillar edicts of Asoka
 - Temples built by Asoka
 - Bodh monasteries built by Asoka
15. In Map 6 F represents
- Rock edicts of Asoka
 - Pillar edicts of Asoka
 - Temples built by Asoka
 - Bodh monasteries built by Asoka
16. In Map 6, the present day Kathmandu (capital of Nepal) is shown by the name
- Lolita Potan
 - Rampurva
 - Kapilvastu
 - Rumindei
17. In Map 6, how many rock edicts are shown?
- 12
 - 10
 - 13
 - 14
18. In Map 6, how many pillar edicts are shown?
- 8
 - 9
 - 10
 - 11
19. The two pillar edicts of Asoka found in Nepal (as seen in the map) are
- Nigliva and Rumindei
 - Nigliva and Lauriya Arat
 - Rumindei and Topra
20. Tosali as shown in the map was
- Capital of Asoka
 - One of the five provinces of Asoka
 - One of the provinces of Chandragupta

ANSWERS

1. (iii) 2. (iii) 3. (iii) 4. (ii) 5. (i) 6. (i)
7. (iii) 8. (v) 9. (ii) 10. (i) 11. (iv) 12. (ii)
13. (iv) Although all are names of the same place but (iv) is the right answer. 14. (ii) 15. (i) 16. (i) 17. (i) 18. (i) 19. (i) 20. (ii)

(To be continued)

ESSAY CONTEST

Even at its ripe old age of 100 years, the Congress monolith stands strong and mighty. The party has, no doubt, had a chequered history - the stormy pre-independent days and the debacles of factionalism which crept in (trying to strike at the very roots of the party) during the post-independent era.

With a view to set young minds thinking, **CCTimes** announces an essay competition on - 'Indian National Congress—gains and losses'.

Send in your entries in **not more than 500 words**, latest by **June 25**, and **win prizes worth Rs 150, Rs 100 and Rs 75**.

AMERICA'S INTEREST IN INDIA

BY GEORGE ROSEN

Two movies and a popular TV programme, the assassination of Indira Gandhi followed by a new election and a new PM and a disaster in an American-owned firm in Bhopal have brought India to the attention of a far wider range of Americans than before. At the same time as the Bhopal disaster, a spy case, and charges of undue American interest in Indira Gandhi's assassination (set off by a book on Indian politics by an American political scientist) may have made Indians more aware of America's interest in India. But as a recent headline in the *New York Times* trumpets, "India is on our minds, but whose India?": while in India there is also a question as to how deep this American interest is.

In trying to answer the first question it is clear that there are many Indias, each of interest to different groups in the US. The appeals of the movies and TV programme are the widest in terms of numbers. All three films—*Gandhi*, *Passage To India* and *Jewel In The Crown*—were made in England, where an underlying historical interest is only natural. Of course many of the American viewers would have read the E.M. Forster novel, fewer the Paul Scott novels; many would also have known something of India's leader of the Independence movement, Mahatma Gandhi, and of his unusual ideas. The broader appeal of the movies, though, would also have reflected the wider involvement of Americans in a confusing Asian world, and the appeal of a man—Gandhi—who by his own actions was able to change the world in which he lived.

What groups are interested in contemporary India? First there is a scholarly group engaged in research in India's culture and society, both its historical past and its contemporary scene. One attraction is the intrinsic worth of the products of a great culture—India's art, literature, architecture and religion. There is also the intrinsic interest of the changing Indian society including its polity and economy, as that society responds to new pressures and demands. It is this process and problems of change that attracts the attention of American social scientists, including anthropologists, economists, historians and political scientists. India, with approximately 800m people, is one of the largest countries in the world; as a democracy it is one of the most open countries of the world; it is one of the few Asian countries where it is possible to do significant research in a variety of fields using English language material as a source. It is those same problems perceived by laymen that

may discourage a wider public interest in India, since the problems of India's apparent great size, bulky and rapidly growing population, ethnic complexity and grinding poverty seem overwhelming.

Another relatively small American group that is interested in India is the American foreign policy making group. This group not only includes the India 'hands' in the various government agencies, but the political leaders who set the framework within which those agencies function. The main focus of American foreign policy is the Soviet Union, and a country's importance in the world is determined by its geographic and political relationship to the USSR. India, while non-aligned, is friendly to the Soviet Union and neither in open conflict nor under a threat from it. Therefore it is regarded more as a minor rather than a major player in the game of American policy. One consequence of this centering of American interest upon Russia is that neighbours of India that are closer or more directly involved with the Soviet Union, including Pakistan and China, are considered more important to the US. India's relationships with those countries are ignored or brushed aside. America's 'India hands,' including those in government, are aware of India's major role in South Asia, but South Asia is a peripheral rather than central interest for American foreign policy, although it is of course central to India's policy makers.

American policy makers of the department level are inevitably interested in the scholarly work being done by American scholars in related fields. One such piece of research by Prof Robert L. Hardgrave of the University of Texas, *India Under Pressure*, was published in full in mid-1984. The research was carried out with the support of the U.S. State Department after a nationwide competition. That much criticised work sought to provide the State Department and the wider interested public with an objective, scholarly picture of the state of the Indian polity, and of American policy towards India. Like other scholars Hardgrave stresses India's importance in South Asia, and India's significance for American interests—it is a book that can only be described as sympathetic to Indian interests.

Another American group with interest in India includes American business firms with any investment in India or considering such a step. US firms are currently the largest foreign investors in India; and the US is India's largest trade partner. American business firms see India in the same category as China, as a very large

But they are also aware of the troubled history of past investments in India, including by IBM and Coca-Cola, and of the problems in investing in India—some real and some mythic. With India there is a long record of both investment and some frustration, and the level of excitement is low.

Two other groups have become somewhat important in influencing American perceptions of India. The first are various religious groups that claim to be offshoots of varieties of Hinduism. These religious groups have some appeal to individuals, especially younger people, who wish to escape the pressures of American life, especially its 'materialism', and who seek another set of values and ways of behaviour. The Krishna Consciousness Society and the Sree Rajneesh group attract individuals looking for a different life, but further convince non-adherents of India's exotic and other-worldly quality. They may in fact create some antagonism towards India from Americans because of the unusual behaviour of the devotees of those two sects.

The final group is the large number of Indians—certainly several hundreds of thousands—who are now living and working in this country. Some of these have become American citizens, and whether they are citizens or not, they are making significant contributions to business, science and scholarship in this country. Clearly they influence American attitudes towards India; their business firms are often interested in India; their contributions to scholarship and science are welcomed here and in India. It would be expected that their presence and influence by votes and contributions will affect the American sense of India and American policy towards India. Potentially this group may have the longest-run influence upon future American-Indian perceptions of each other.

But even recognising the existence of groups in the US with a strong interest in Indian culture, society and policies, the numbers in such groups are not large. One can expect that barring any crisis the American interest in contemporary India will remain at a low level, but with a slowly rising trend. The Festival of India celebration should widen interest somewhat. There is in the US a basic residue of support for India as a democracy, but interest in India is marginal, rather than central, to any major American interests, or to any large American constituency. Meanwhile the work of American scholars on India will continue, if it is permitted, and it is to be hoped that Indians regard this as a friendly rather than a hostile interest. It is that work that is one of the major ongoing means for achieving improved understanding of contemporary India in the US. ■

USA'S HUMAN RIGHTS STAND

The American Government, it seems, has taken upon itself the sole responsibility of protecting human rights. Consequently, it selects countries to censure where it feels the human rights are being violated. Besides censure by the national media, the US Congress holds hearings on sensitive internal matters of other countries, which should be none of its concern. However, the government conveniently forgets its own past and ignores the present.

Can the US afford to adopt a 'holier than thou' attitude? There are numerous incidents of human rights abuse in America and it is interesting to note that most of them concern non-whites. Here we will focus only on three groups: the Red or 'native' Indians, the blacks and the Japanese-Americans. Also important is the American behaviour during the Vietnam war.

When Columbus discovered the 'New' world, the 'virgin' country already contained nearly a million inhabitants whom they call "the native Indians". In a world where the population is always growing, they number only about 550,000 today, of whom 380,000 live in reservations, where the conditions of life do not compare with the rest of America. Their history, since the colonisation of America by the white race, is one of sorrow, dealings and betrayals. Between 1778 and 1871, a total of 389 treaties were made and remade in which the government set aside 'homelands' (reservations) for the tribes and took them over again, when they found that the land was suitable for settlement by whites. When the native Indians put up a fight they were felled by the superior white might. According to the Northwest Ordinance of 1787, it was promised that land and other property would not be taken from Indians without their consent, except in just and lawful wars authorised by Congress. Such wars were never declared but the Indian population was decimated. One must not forget that Andrew Jackson, one of the favourite Presidents in American history was worshipped as an "Indian killer". Even the reservations were not safe, as the 'Wounded Knee' incident on Pine Ridge Creek showed. In 1890, nearly 300 Indians were slaughtered and particularly horrifying was the sordid pursuit of fleeing women and children, who were shot and left to die in the snow.

Today, the Indians are among the most impoverished groups in the country, three-fourths of them being below the poverty level. Three-fourths of them also live in housing designated substandard.

The suicide rate among Indians is double that of non-Indians. The paradox is that while the US government employs 20,000 persons to promote the welfare of Indians and spends \$ 5,000 per family in allocated assistance on Indian reservations, the average income per Indian family is a mere \$3,000 per annum.

More alarming is the systematic effort by the government to curb the growth of the Indian population. Since the 1940s there has been rapid growth in their population and it has appeared easier for government financed medical personnel to sterilise poorly educated women rather than provide them with contraceptive devices. Indian leaders have charged that the federal government has been pursuing a covert policy of genocide through these sterilisations. Whether or not there is any truth in the claims, the frequency with which Indian women are coerced into sterilisation by hints that their welfare payments will depend on their cooperation, or are sterilised without their informed consent is another example of American attitude towards their non-white citizens. In fact, in 1977, several north American Indians argued before the non-governmental organisation of the UN in Geneva that the UN De-colonisation Committee should investigate the status of the native American peoples under the existing national government in America.

The condition of the black Americans, the only group in America, which came not by choice but via kidnapping and then forced to serve as enslaved labour is not much better. Even after the civil war, which was fought partly because of them, their conditions did not improve. The status of slavery was withdrawn but actual conditions of living remained the same, especially in the South. Segregation flourished through "Jim Crow" laws in the south, which made housing, education, public facilities—in fact every field of life separate for blacks and whites. Separation inherently meant inferior facilities and blacks were pushed into a much lower socio-economic status than would have been the case had there been no racial discrimination. What is worse, this kind of segregation was not a 19th century fester: it carried on into 1964, when the Civil Rights Act of 1964 gave them their civil rights. This, too, did not come of its own accord. They struggled for nearly a decade to attain it at the loss of many human lives. The southern blacks who had been given the right to vote earlier by the 15th amendment to the Constitution had lost it in the last three decades of the 19th century as a result of white intimidation

again. They won only in 1965, when the Voting Rights Act was passed.

As for methods of intimidation one need not mention just the white-hooded Ku Klux Klan. As late as 1920, 70 Negroes were lynched, many of them soldiers who had risked their lives during World War I. Their crime: their exposure to Western democracy had made them too "uppity". During the civil rights struggle of the 1950s and 1960s, the cases of human rights abuse are many. To cite one example, the retaliation of the segregation police force in Birmingham, Alabama, against the non-violent struggle led by Dr Martin Luther King Jr, was extreme in 1962-63. Children were beaten up, police dogs were set on women and children, who also had to face powerful water hoses.

The Japanese-Americans, are another case in point. The 19th century opposition to Asian immigration, one feels, culminated in the bombing of Hiroshima and Nagasaki, 16 hours after which President Truman instead of commiserating at the death of over 135,000 innocent civilians, said exultantly, "We have spent \$2b on the greatest scientific gamble in history—and won". Early in the twentieth century, the public school board in San Francisco prevented Japanese immigrants from sending their children to school. Shortly afterwards, the "gentlemen's agreement" was signed between Japan and America in which Japan agreed to keep Japanese emigrants from leaving for America. A Chinese Exclusion Act had earlier (1882) limited Chinese immigration. This was at a time when America was welcoming new immigrants of all types from the western world. During World War II, their attitude towards the Japanese-Americans speaks volumes. During World War I, German-Americans had not been considered suspects and put in camps but in 1942 a military order designated the West Coast restricted zone and imposed a 8 p.m. to 6 a.m. curfew on Japanese Americans.

To come down to even more recent times, American conduct in Vietnam in the 1960s is quite deplorable. As a result of fire-bombing and the use of napalm, numerous civilian lives were lost and millions of acres of land was laid waste.

After such incidents, the US hopes that the world will forgive and forget. It does its bit of token repentance—by elevating the native Indian to the status of a "noble savage" and inscribing him on a postage stamp, and by giving token jobs in government to its blacks, but do these token gestures excuse the deed? It is, however, the personal affair of the U.S. and it has to decide on how to solve its own problems. One can only wish that it would feel the same way about the rest of the world.

S B

CURRENT EVENTS

PUNJAB

EXPLOSIVE ISSUE

The Punjab impasse has traversed a full circle and is almost back to the starting point. The feuding issues remain as unresolved as they were a year ago and several more have been added to the list to compound the problem. The mounting tensions, the insecurity and the entire pressure cooker atmosphere building up in the troubled state portend another explosion.

The government's conciliatory package for the agitating Sikh faction early this month was designed to create negotiable conditions at least if nothing more. But, far from doing that the package succeeded in making the Akalis more adamant about the acceptance of their remaining demands, in toto. The much demanded release of the detained SGPC President Gurcharan Singh Tohra turned out to be an unwise political gamble for the Centre. After being released Tohra took considerable pains to demonstrate his commitment to the extremists. The assassins of the late PM were glorified by him and described as martyrs. The tension further escalated when Tohra lobbed his bombshell on surprised political spectators when he announced imminent plans of demolishing the Akal Takht and rebuilding it. And his attitude remains as unrelenting on the remaining Akali demands, viz., pardoning and reinstatement of Sikh soldiers who deserted the army in the wake of Operation Bluestar, abolition of Special Courts; rehabilitation of riot affected people; lenient treatment of detained members of AISSF and, above all, acceptance of the Anandpur Sahib resolution.

Even while Tohra and other Akalis were busy demonstrating their unyielding stance, terrorists in the state once again established their power to strike innocent victims with impunity and get away unscathed in the process. The abortive bid on the life of the AICC(I) General Secretary, R.L. Bhatia, by two unidentified assailants at his residence in Amritsar, in which one person lost his life, exhibited the fact that the basic organisational structure of terrorists remains intact even after their supposed flushing out by the army. The Punjab police, CRPF and BSF, in a massive combined raid on the Temple *sarais*, arrested three suspects including a *sevadhar* and a SGPC gunman. But the assassins are still at large—another one up for the terrorists and a major set back for the already terrorised people of the state.

Meanwhile the released Akali leader, Harchand Singh Longowal, visited the riot-affected victims in Delhi, hours after the Centre announced the appointment of Justice R.N. Mishra, Judge of the Supreme Court, as head of the commission constituted to hold a judicial inquiry into the Delhi riots. Upon his arrival in the capital on Apr 26, Longowal acted as Tohra's mouthpiece reiterating the Akali demands and the plan of demolishing the Akal Takht. And then soon after his return to Amritsar the Akali Dal surprised the government once again. On May 2, the Akali Dal factions led by Longowal and Tohra were dissolved in a bid to strengthen the unity of the Sikh Panth. In their place a nine-member ad hoc committee, headed by Joginder Singh, father of Jarnail Singh Bhindranwale, was formed, to run the affairs of Shiromani Akali Dal. The government, on its part, is now playing the waiting game to see what overture the Akalis will make and perhaps also to rectify to some extent the impression of subjugation it appears to have given the Akalis. The mode of state once again appear to have taken the back seat in Punjab. With another Bhindranwale at the helm of Akali affairs it can only be hoped that it is not a case of like father like son.

For ever since he has assumed control terrorists have come back with a vengeance. They started off by gunning down Balbir Singh, President of the Punjab unit of the Lok Dal in Hoshiarpur on the morning of May 10 following which violence erupted in the city, compelling the authorities to clamp curfew for an indefinite period. And on the same day Delhi once again became the blood arena for the deadly games of anti-social forces. With a series of well-planned bomb explosions in the capital as well as in Haryana, Himachal Pradesh, UP and Rajasthan, the terrorists had the entire north reeling under a wave of shock, panic and hysteria. Duping unsuspecting victims by planting transistor-like bombs in buses, crowded places and even trains, they claimed over 70 lives, with more than 100 people on the critically injured list.

While the possibility of a foreign hand in the gruesome carnage cannot be ruled out—more specifically Pakistan's vendetta for India's role in the 1971 Bangladesh war—the master minds behind the whole show

are obviously Akalis. With the anniversary of Operation Bluestar just round the corner it may be their litmus test for assessing the overall situation before executing more dastardly outrages. But the authorities have taken prompt and timely action even calling the army in for assistance. Already over 1,000 suspects have been rounded up from Delhi and the other affected states. The fear psychosis instilled in the masses will, however, not be wiped out so soon. The entire Indian masses can only keep their fingers crossed in the hope that some sense prevails on the extremists and nothing untoward happens to further jeopardise the already bleak prospects of a solution to the Punjab imbroglio.

ANTI-RESERVATION STIR

COMPOUNDING THE PROBLEM

What started off as an anti-reservation stir two months ago has now become a mindless orgy of violence and destruction and the real issues have blurred into insignificance. Predictably pro and anti-reservationists continued to be at loggerheads throughout April and while the former announced plans to organise district level conventions to safeguard their constitutional right of reservation the latter gave a new turn to the agitation. Responding to a call given by the Akhil Gujarat Navrachna Samiti the anti-reservationists decided to court mass arrests in their *jail bhara* agitation.

Meanwhile incidents of arson, looting and sabotage continued unabated. A court room was set on fire in Rajkot and an abortive bid made to blow up a telephone exchange with detonators. Then, on Apr 19, the state government, in a bid to create an atmosphere congenial for meaningful negotiations announced its acceptance of the anti-reservationists' demands. These included release of detained student leaders, withdrawal of termination orders served on striking junior doctors and an inquiry into alleged police excesses. Surprisingly, however, the agitators preferred to turn a deaf ear to the government's offer.

The state government was presented with a dilemma. Its initial strategy of asking the police to go slow did not yield expected results and, in fact, resulted in an increase in violence. And in these circumstances the jittery government decided to give the police forces a free hand. The police lined up to its notorious reputation and went berserk in Ahmedabad. Perhaps what it did was in retaliation against its being made the consistent target of attack of agitationists. All the same it does not justify the virtual reign of terror policemen let loose in Ahmedabad. Atrocities were committed on innocent men, women and children. In the face of ensuing criticism against the state government, a two-man committee was hurriedly constituted to inquire into the alleged police excesses.

And, on Apr 22, strife torn Gujarat's pot of troubles boiled over, its police force rose in revolt and the protectors of law and order went on a rampage, indulging in large-scale violence. The Press was made the main target of police fury and newspaper offices were attacked with impunity. The offices of *Gujarat Samachar*, a leading vernacular newspaper were heavily damaged after they were set on fire. Mobs also attacked other newspaper offices resulting in the closure of many of them. Keeping the chaotic conditions in view the army was called in to restore the state some semblance of law and order and indefinite curfew was clamped in several areas of the state including Baroda and Surati.

The violent events in the state even prompted the anti-reservationists to call off their stir for an indefinite period of time. But the situation in the state was completely out of hand by then and violence continued unabated. Already a shockingly large number of people have died and a larger number lie in hospitals all over the state, critically injured. Hundreds have been rendered homeless as crazy mobs go about on house burning, pilfering and plundering sprees.

The anti-reservation stir turned class-caste war turned communal has rocked the foundations of the newly elected Solanki ministry. People are clamouring for CM Madhavsingh Solanki's resignation and the imposition of President's rule in Gujarat. So far PM Rajiv Gandhi has adamantly refused to consider either of the demands. By the looks of it then Solanki is stuck with a sticky problem which promises to get stickier. For, on Apr 30, an agitation against the caste-based roster system aggravated matters. State government employees demanding abolition of this system for promotion in government and semi-government organisations went on mass casual leave. This resulted in complete paralysing of work in several government offices. Senior officers of the level of deputy sec-

employees demands included the Governor's intervention against alleged attempts to suppress this agitation by the ruling party and also publication of the Sachawani Committee report. This committee was appointed by the state government to review the caste-based roster system of education under which unfilled reserved quotas for promotions in government and semi-government employment are carried over till such a time as suitable candidates are found from the reserved categories of castes and tribes.

This system had been generating discontent for several years and its opposers could not have chosen a more inopportune moment to express their displeasure.

Thankfully though, owing to hurried discussions conducted by the state government with the agitating employees the week-long anti-roster system strike was called off. The government wisely decided to concede to the demands of the striking employees including the acceptance of the main recommendations of the Sachawani Committee report which has recommended the abolition of the caste-based roster system, suspension of police officers responsible for lathi-charge of the Sachivalaya staff, on April 29, and conduction of a judicial inquiry into the incident. With the calling off of what might have been the proverbial last straw in the Solanki ministry's cup of troubles, attention has once again shifted to the anti-reservation agitation. Whatever its outcome, the stir has at least succeeded in awakening the Centre to the pitfalls of the controversial reservations issue. And, to avert any similar agitation in any other state it has asked state governments not to increase the reservations quota till a national consensus emerges on this issue. For now, however, all efforts are being made to resolve the jinxed Gujarat agitation.

SRI LANKA

IN DIRE STRAITS

Reports of killings, bloodshed, atrocities are pouring in ceaselessly from across the Palk Strait. For Sri Lanka solution to the Tamil issue continues to be as elusive as ever. That Jayewardene is in no mood to contemplate a political solution has been made abundantly clear. During the British PM Margaret Thatcher's visit in the course of a six-nation Asian tour, Jayewardene was openly critical of India's stance and more particularly its alleged aid to terrorists. The UK is already giving aid to the island to cope with the Tamil militants and Thatcher reiterated Britain's stand. She too, however, rejected a military solution and expressed the hope that Jayewardene would continue to work for a peaceful solution, and for reconciliation of the terrorist problem, which could, according to her, be achieved by joint efforts with India.

Neither the Sinhalese, the Sri Lankan army nor the Tamil militants obviously approve of a peaceful solution. And now the attack on the island nation's Tamil population has become three-pronged with the Muslims joining hands with the army. Communal clashes between Tamils and Muslims have already resulted in considerable loss of life and property. And thanks to the assistance provided by the army the Muslims have an upper hand. Dusk to dawn curfew has been imposed in parts of the troubled eastern province to quell the Tamil-Muslim clashes but has been ineffective in curbing the violence so far. Apparently the Muslims, who are also Tamil speaking but are considered a different race, had been adverse to the Tamil demand for Eelam, a separate nation, as well as the proposal for regional councils. But what triggered off the Tamil-Muslim communal clashes was the killing of a few Muslims by the Tamil militants. A rift has thus been created within the Tamil-speaking population and violence has swept over the hitherto relatively unaffected eastern region as well.

India's growing concern at the continuing stalemate is understandable. Not only is it having to cope with an ever-increasing influx of refugees but also with the growing unemployment of fishermen in the state of Tamil Nadu who have stopped venturing into troubled waters to earn their livelihood. Then the reported induction of foreign agencies—both security and intelligence—is also causing concern to onlookers in New Delhi. And in a bid to continue efforts to find a speedy and final solution of the Tamil problem, on a political basis, acceptable to all parties concerned (sic) New Delhi has also set up a six-member committee headed by the Union Home Minister, S.B. Chavan. The committee includes ministers and top brass of the Home ministry and the External Affairs Ministry. And to demonstrate the credibility of its intentions India has now decided to pursue the problem of the plight of Tamils in Sri Lanka with the Human Rights Commission of the UN. An international emergency committee comprising of people with experience of human

rights and rule of law in the island and render assistance to the victims. This committee has been organised under the auspices of the forum on ethnic conflict, development and human rights (SIFEC) recently established by the Norwegian Peace Research Institute and the Netherlands Institute of Human Rights.

For the moment though the Tamils live under a constant threat of life and property amidst an animosity-ridden majority. Not all are lucky enough to flee either. And each new day is sounding the death knell for them—steadily reducing the number of unlucky ones, too.

NAM MEET

TAKING A STAND

As chairperson of the non-aligned movement, PM Rajiv Gandhi is going places. On Apr 20 an extra ministerial meet of the non-aligned coordinating bureau was held at New Delhi to demonstrate solidarity with oppressed Namibia. South Africa's continued illegal occupation of Namibia, its massive militarisation and use as launching pad for aggression against other independent African states has become a cause for concern for various countries of the world as it poses a serious threat to global peace and security. The recent developments in South Africa helped to reinforce the suspicions of the international community regarding its bonafides with regard to the security council's resolution on the subject of Namibian independence. There is a continuing impasse in the implementation of the internationally accepted plan on this matter. And the latest turn in the Pretorian regime's con game to set up a transitional government with a so-called multi-party conference is obviously designed to fabricate possibilities of unilateral declaration of independence on the part of the puppet government.

The meet played South Africa's latest overt conspiracy and rejected outright the doctrine of constructive engagement with Pretoria, essentially designed to delay Namibian independence. The Pretorian government's continued defiance of the UN resolution also came under sharp attack. Also the non-aligned movement's growing impatience with western duplicity was also clearly reflected. The non-aligned nations also gathered to express support for the South West African People's Organisation (SWAPO) as the sole and authentic representative of the Namibian people. They also rejected any linkage between Namibian independence and the extraneous issues with which the West and South Africa were both trying to blur the importance of the main issue.

The meet emphasised the need for increased moral and material support for non-aligned countries to SWAPO. And, in a surprise welcome move, PM Rajiv Gandhi announced India's decision to accord full diplomatic recognition to the local SWAPO office. Following India's example Iran also did the same. The non-aligned nations collectively decided to reactivate the security Council on the issue and also exhorted the international community to drive the racist South African regime into diplomatic and economic isolation to make it end its occupation of Namibia. It was also decided that 19 member-states of the UN would send ministers to the Council meet likely to be held in June to present the Namibian case. But the non-aligned initiative has already yielded the desired result as on May 4 the UN security council rejected South Africa's move to set up an interim government in Namibia and also asked the Pretorian regime to rescind its decision. Heartening news for SWAPO, Namibia and the entire non-aligned world!

HBJ PIPELINE

TOEING A NEW LINE

With regard to the Hazira-Bijapur-Jagdishpur (HBJ) gas pipeline the government obviously believes that too many cooks would spoil the broth. In a turn about over its earlier decision to sub-contract the project to various vendors, mostly public sector enterprises, including Bharat Heavy Electricals Limited (BHEL), Electronics Corporation of India Limited (ECIL) and Telecommunications India Limited (TCIL) the government has now decided to invite fresh global tenders on a turnkey basis. With this the government has gone back on its commitment to the public sectors as the role of public sector units has suffered substantial reduction by this decision. Also the proposed boost which the new government was planning to give to indigenisation stands to suffer by this.

The HBJ pipeline project is by far the largest project of its kind which India planned to undertake. The construction of the 1,760 km pipeline costing more than Rs 1,700 crores is indeed a massive job and India is new to such an experience. Earlier the government had considered

however, many doubts about the expeditious completion of the project and efficacy of those executing them arose. Numerous pitfalls were also envisaged. Later conscious decisions were taken based on considerations like the relative inexperience of Indian companies in laying such lengthy pipelines and the disadvantages of putting all the eggs in one basket. According to the government project coordinating and monitoring would have been difficult in case of several vendors. Also it was felt that turnkey proposals would be costlier, result in delays and hinder indigenous efforts. Therefore, single point responsibility for project execution, construction, commissioning and coordination was decided upon. Now, barring the procurement of line pipe, all other components of the project including pipeline material, construction of pipeline, setting up of a compressor station and telecommunication facilities will be entrusted to one agency on the basis of tenders.

The decision has come in for expected criticism from all quarters. The public sector undertakings for which the government professes great concern are the ones which are facing enormous difficulties on account of the turnkey approach. It has also limited their roles to mere evaluation and superficial supervision, even companies like the Engineers India Limited (EIL) and Gas Authority of India Limited (GAIL) are now in tight spots, because prior to the decision they had already contracted various foreign companies to assist them in their job. The Centre is still justifying the controversial decision by saying that adequate weightage will be given to bidders who will use indigenous capabilities so that domestic manufacturers in relevant areas would get an opportunity to participate in the project.

The turnkey decision has also jeopardised India's financial position. Japan, which had earlier agreed to give a 55b yen (over Rs 250 crores) credit for the project is now having second thoughts. The amount had been offered by Japan under its Overseas Economic Cooperation Finance (OECF) programmes to finance the 36 inch linepipes for the 640 km Hazira-Guna sector. Its decision to review the offer has injected an element of uncertainty regarding the financing of the project. The World Bank is also believed to be having serious reservations about financing the project. And, in the probable absence of World Bank aid, even the 15% price preference will not be available for domestic suppliers. If so, the government will find it extremely difficult to live up to its optimistic claim that construction of the HBJ pipeline will commence by the end of this year, leave alone its commissioning, in March 1987, under the revised schedule drawn up by the Ministry of Chemicals and Fertilisers.

BY-ELECTIONS

SOME EARLY SETBACKS

Already the verdict of the people is showing signs of reversal. Congress(I) suffered a setback in the by-elections to the three Lok Sabha and 26 Assembly seats spread over 11 states. The by-elections to the Assembly seats were necessitated either due to the countermanding of polling during the March elections or ordering of repoll on account of irregularities. The Baramati Lok Sabha seat, (Maharashtra) had been rendered vacant following Sharad Pawar's resignation in order to enter the state Assembly; elections in Ladakh could not be held with the rest of the country in December last because it was snow-bound while the Lok Sabha seat of Tiruchendur in Tamil Nadu had become vacant owing to the death of its sitting Congress(I) member.

Thus, on Apr 24, about 4m voters exercised their franchise. The 26 Assembly seats including four in Rajasthan, three in UP, five in Bihar, three in West Bengal, three in Orissa, two in Karnataka, one MP and five in Andhra Pradesh. The results were a jolt for the ruling party. Emotional and national issues took a back seat and what probably contributed to Congress(I)'s failure were, the rising prices, improper choice of candidates and an overall disenchantment with the government over its ineptitude to deal with major domestic issues. Perhaps the only saving grace was that it bagged two of the three Lok Sabha seats, viz., those of Tiruchendur and Ladakh while that of Baramati went to the Progressive Democratic Front.

In Andhra Pradesh, an NTR domain, the Telugu Desam won two of the five assembly seats while the Congress(I), Majlis-e-Ittehadul and Janata Party won one each. In Karnataka, the Janata Party continued on its winning spree winning both the seats contested for. Even in PM's home state, UP, the Congress(I) lost two of the three Assembly seats; while in Orissa it could manage only one seat, the other two went to Janata and Independents respectively. In Bihar, where polls were

of the five seats contested. The Congress(I) emerged the sole winner in MP where Ajay Singh, son of the former CM, Arjun Singh, won the single contested seat. It also bagged two of the four contested seats in Rajasthan while the BJP and Independents won one each. And in the left Front stronghold of West Bengal the Congress(I) suffered humiliating defeat once again—all three seats went to the Left Front.

But perhaps the most ignominious defeat for the Congress(I) was at the hand of the much criticised Shiv Sena in the Bombay Municipal Corporation elections. The Shiv Sena won a record 74 seats in the 170-member corporation, just 12 short of the total majority. The Congress(I) could pick up a meagre 37. And while it may be a little premature to assume Congress(I)'s declining popularity on the basis of the by-election results, it would be equally foolhardy to ignore the subtle warning signals for the ruling party to shrug off its growing indifference.

DEFENCE

PACKING A PUNCH

In the light of Western sources supplying sophisticated weapon systems to India's neighbourhood at concessional prices as also Pakistan's relentless pursuit of nuclear weapons, a constant reassessment of India's battle environment is being carried out by the Centre. At the moment a perspective plan is being drawn up keeping in view the long term requirements in various fields including communications. The self-reliance in India's case is vital because being a non-aligned country it has to struggle harder to get assistance from external sources. Due consideration is being given to modernisation also and the defence expenditure has been going up accordingly. The navy has been allocated increased funds and highly sophisticated submarines are being manufactured. Development of an indigenous engine for India's main battle tank Arjun are also continuing. At the moment this tank is being tried out with an imported West German engine. A search is also on for a new power pack for the Vijayantha tank.

Apart from this it has also been decided that the strength of the National Cadet Corps (NCC) will be increased by the recruitment of an additional 10,000 cadets every year. The welfare and settlement of ex-servicemen will also be given due importance. In addition to this India has made a defence deal with Italy. Under a memorandum of understanding signed with Italy for cooperation in defence research the two countries will exchange information in selected areas of defence research that is mutually beneficial to both. Italy will provide information of equipment in exchange for data that will help the country topicalise its weapons systems.

Quite surprisingly the US too is showing signs of interest in India and might just extend its armed tentacles to this country also. Perhaps Washington believes that the best way to build a durable, close relationship with India is to forge arms supplies links. Already marginal changes have been made in the US export law to enable American arms manufacturers to strike direct deals with countries like India in certain specified areas of weaponry. In early May the US Under-Secretary of Defence Policy, Fred Ikle, was in New Delhi for the sale of two C-130 planes for the Indian Antarctica mission. Apparently the sale of arms and artillery and sophisticated missiles was discussed though no specific deal was made. It is believed that the US might even offer to sell sensitive defence items, too. Nothing has been decided yet and in view of past experiences with the US, when it withdrew its sale of defence equipment offers at the last minute, it would be unwise to pin too many hopes on their surprise moves. Meanwhile, the government at the moment is seeking the opinions of the Opposition before finalising its nuclear policy in view of Pakistan's frantic acquisition of nuclear arms.

PRICES

METEORIC RISE

The euphoria created by the announcement of the general budget 1985-86 has evaporated within the four-week, post-budget period. Essential commodities have shown a steep rise of 2.3% contrary to the government's assertions that the inflationary impact of the budget would be minimal and prices of essential commodities would rise only marginally, if at all. As it is, the recent rise has been attributed to budgetary levies and increase in freights.

In fact, before the budget prices had stabilised with some improvement in the overall price situation, the annual rate of inflation as in March 1985 had declined to 5.8% from 9.2% in the same month of the pre-

(Continued on page 60)

CURRENT EVENTS

NICARAGUA

SCAPEGOAT FOR SUPERPOWERS

Recently, President Reagan invoked his emergency powers under the International Emergency Economic Powers Act and announced that the US was imposing a total trade embargo on Nicaragua. He also announced a ban on Nicaraguan ships and planes landing in the US and an early termination of the treaty of friendship with that country. He said that this was being done because "an emergency situation had been created by the aggressive activities of the Nicaraguan government in Central America." He, however, gave no details of the "aggressive activities".

The actual reason for taking economic sanctions against Nicaragua can be explained in the context of the failure of Congress to go along with Reagan in his efforts to resume US aid, both humanitarian and military, to the Nicaraguan contras who are trying to overthrow the Marxist Sandinista regime which has been ruling Nicaragua since 1979. The Democrats in Congress are interested in restricting aid for articles like food and medicine.

Funding for the contras was started through the CIA in 1981, but was cut off last summer, when it was revealed that the CIA had participated in the mining of Nicaragua's harbours. However, the pressure has been continued through various other strategies like the staging of large scale "training exercises" with Nicaragua's pro-US neighbour, Honduras. Faced with growing opposition to his plan to give more direct aid, President Reagan recently went on a personal crusade to get \$14m in assistance to the contras. He compared the anti-Sandinista guerrillas to America's Founding Fathers and said that "the US cannot walk away from one of the greatest moral challenges in post-war history".

The last straw which induced him to pass the economic sanctions was Nicaraguan President Ortega's visit to Moscow, where he was assured of increased economic aid by the Soviet leader, Mikhail Gorbachov. Actually, the sanctions will not hurt the country very much because it mainly exports bananas and a few other farm products and imports fertilisers, agricultural implements and pesticides from the US. This trade can easily be transferred to Europe and the Soviet Union. The Nicaraguans, however, plan to take the issue to the World Court, where they have already filed a case against America.

LEBANON

AS BAD AS EVER

After 15 hours of fighting in Beirut, the PM, Rashid Karami, announced the resignation of his government of national unity. The government had been formed with the aim of bringing together the country's diverse political and religious factions. However, two of the crucial leaders, Walid Jumblatt of the Druzes and Nabih Berri of the Shia Amal militia, had long abandoned it. After a talk with Syrian leader Hafez Assad, Karami agreed to lead a caretaker government. Syria has been a sponsor of Lebanon's national unity government and would not like to see its total collapse.

Meanwhile, the fighting in Beirut ended in the victory of the Amal militia, who are Shiite. With the help of the Druze, they succeeded in crushing the Sunni Muslim militia known as Mourabitoun, and became the unchallenged masters of West Beirut. The fighting in the south, too, has been increasing as the Israelis slowly withdraw. The Maronite militiamen, who call themselves the Lebanese forces have rebelled against President Gemayel because of his close links with Syria and have joined up with the Israeli-backed South Lebanon Army and are attacking Lebanese army bases and residential areas.

After a brief hands-off period, the US again appears to be moving back into the local game. Recently, Assistant Secretary of State Richard Murphy visited Jordan, Israel, Egypt and Iraq with the aim of finding some way to promote direct talks between the Arabs and Israel over the West Bank. Hopes of achieving an accord are dim, as Jordan's King Hussein pointed out to Murphy that the Palestine Liberation Organisation's (PLO) Yasser Arafat still refuses to recognise Israel's right to exist (UN Resolution 242). However, one good portent was that after a visit by Israeli Cabinet member Ezer Weizman to Cairo, the Egyptians have tentatively agreed to a summit meeting later this spring between Israeli Prime Minister Shimon Peres and Egyptian President Hosni

International

Mubarak. Egypt opposed the Israeli invasion of Lebanon in 1982 and after the massacre at the Sabra and Shatila Palestinian refugee camps in Beirut, withdrew its ambassador from Tel Aviv. The summit meeting could signal the end of the three-year-old "cold peace" between the two countries and could eventually lead to a West Asian accord.

SOUTH AFRICA

HEADING FOR TROUBLE

Despite the fact that President P.W. Botha's government is slowly inclining towards more social and constitutional reforms, South Africa appears to be heading towards a civil war. On the positive side, South Africa decided to scrap its laws prohibiting mixed marriages and inter-racial sex. This law had been one of the corner stones of apartheid, because it was concerned with the preservation of "national Afrikaner identity". Removing this law, therefore, indicates an important shift in Afrikaner policy. However, it is not likely to have much effect because the Group Areas Act and the Population Registration Act which enforce separate living areas and racial classification, both remain unaltered. The question of how to classify children under mixed marriages is also unresolved. Another positive act was Pretoria's withdrawal of its last 500 combat troops from Angola.

But thereafter, the negative side showed up. South Africa announced shortly afterwards that it would set up its own interim administration in Namibia, much to the dismay of the rest of the world. Racial tension, too, escalated in the country when an Afrikaner teenager who had driven into a black township, Neon Uitenhage, was burnt by a group of blacks. Since last August, over 300 blacks and one white infant have been killed in racial violence. On Mar 20, blacks were killed by the police in eastern Cape Province and in April, 17 more were killed.

Intra-racial strife is also on the upswing. In many townships the local police force is almost entirely made up of blacks, often from distant regions and hostile tribes. These ancient tribal animosities have been encouraged by the government and this has served to aggravate the friction which is endemic in the country. Botha laid the blame for the current strife on the United Democratic Front (UDF), a coalition of more than 600 groups, which is the leading anti-apartheid organisation. The UDF is already under a limited three-month ban on indoor meetings and Botha's recent attack on the group raised concern that the government may outlaw it altogether. Actually, Botha does want to negotiate with the black majority. The blacks have to be more wary of the conservatives, whose leader Andries Treurnicht recently declared: "We do not wish to share power with blacks".

PAKISTAN

FRIENDS AND FOES

President Jayewardene of Sri Lanka paid his first state visit to Pakistan at a time when Indo Pak and Indo-Sri Lanka relations were in a state of flux. In Pakistan, he took a bold anti-Soviet, pro-Pakistan stand on Afghanistan, lustily saying, "Free Afghanistan Zindabad!" to a large group of Afghan refugees at Jhelai camp near Peshawar. During his exchange with President Zia, both leaders covertly criticised India, accusing it of "regional hegemonism" and "hegemonistic ambitions". They also said that the Indian Ocean Peace Zone concept, originally a Sri Lankan idea, was "idealistic" and if implemented, would make the Indian Ocean an "Indian Lake".

It is believed that the two leaders also privately discussed specific proposals for joint moves in the South Asian Regional Council (SARC). The two countries have tried to work together against India in the SARC in some earlier meetings also. Jayewardene is expected to visit Bangladesh in the near future. One recent trend visible in Sri Lankan foreign policy is an attempt by it to forge closer links with Bangladesh and Pakistan and have joint position on regional issues with these countries.

On another front, Islamabad's relations with Moscow plunged to a new low shortly after Mikhail Gorbachov assumed charge as the new Soviet leader. Zia was told that Pakistan's policy of collaborating with the resistance guerrillas and cooperating with the US could lead to a deterioration of relationship between Pakistan and the Soviet Union. Recently, Soviet activity along the Pak-Afghan border has intensified. Last year there were 81 incidents in which the Pakistanis claimed their territory had been violated by the Soviets. In the first four months of this

to hit Pakistan and to stem the flow of weapons to these groups from China, the US and some Muslim countries. Alamists in Islamabad are, however, crying "wolf" in the belief that the Soviet Union is about to launch a "full scale" war on Pakistan. The US, on the other hand, sees it as an attempt on the part of Moscow to bully Zia into withdrawing his demands which include a Soviet pull out from Afghanistan, the return of the refugees to their home country and free elections in Kabul.

JAPAN

IT'S A RICH MAN'S WORLD

The impending trade war between Japan and the US finally precipitated PM Yasuhiro Nakasone on to the television screen—a rather unconventional thing for a Japanese Prime Minister to do. Nakasone's aim was to reduce tensions by encouraging the Japanese to "buy foreign". He told the public: "If each Japanese buys \$100 in foreign goods, the increase in imports from that would amount to \$12b, and foreign countries would be happy". He added that he would simplify regulations, standards and other restrictions to encourage imports.

This came in the wake of an announcement by Japan that it would increase exports of cars to the US by 25% over the old quota level, to 2.3m units a year. The result of this announcement was an increase in protectionist fervour on Capitol Hill. US had a trade deficit of \$36.8b with Japan in 1984, which was nearly one-third of its deficit with all its trading partners. This year the trade gap was \$4.3b in February alone, and it is estimated that it will increase to \$50b by December. If the US decides to retaliate with more protectionism, it would mean loss of exports and unemployment in the Japanese market. It is because of this that Nakasone has decided to ignore Japanese norms and go to the public in a big way to convince them that foreign goods are not always bad.

On another front, however, the US may soon face problems with Japan. Of late, the anti-nuclear movement which has been led by the Japanese Communist Party, the Japanese Socialist Party and the Democratic Socialist Party, has taken on a new life. More and more cities and prefectures have begun to campaign for "non-nuclear zones" in their respective areas. The local anti-nuclear movements are largely non-partisan and are being organised by housewives, teachers and municipal workers. Although generally peaceful, there are pockets of militancy; for instance in Yokosuka city which is situated close to a US naval base. The local leaders feel that the only way to ensure the absence of nuclear weapons from its "territory" is to end visits to the base by US nuclear-powered submarines which may or may not be carrying nuclear weapons. Since such visits average two a week, it may portend stormy times ahead.

LATIN AMERICA

NEW RULES FOR OLD

Only hours before his due swearing in as President of Brazil's first elected civilian government in 21 years, Tancredo Neves, the President-elect, became seriously ill. There is many a slip 'twixt the cup and the lip and after his death in April, the leadership passed on to the Vice-President, Jose Sarney. Whereas Neves' election had led to much jubilation, Sarney's rise has led to much speculation. Neves was the "great unifier" and was regarded as a father-figure in Brazil. Many of the members of his party, the Brazilian Democratic Movement Party (PMDB), had been deprived of their political rights by the military regime and feel that civilian rule has been hard won. Sarney, on the other hand, is a conservative, who had loyally supported the military regime. He had switched his allegiance because he did not approve of the presidential candidate of the generals' Democratic Social Party. He had been accepted as the vice-presidential candidate only because it meant more electoral college votes for the party. Many of the PMDB are less enthusiastic about his becoming the President, it is only because rejection could mean return to military rule, and could also reduce Brazil's chances of setting an agreement with its creditors to delay payments on its \$17.2b foreign debt, that Sarney has been unanimously accepted.

Peru, too, had a new government in April. The election winner was the leader of the American Popular Revolutionary Alliance (APRA), Alan Garcia, who is regarded by conservatives as the leader of a radical party. However, he was not moved absolutely left, because the real radicals are in the U. and Left, an alliance of Marxist groups, which got the second largest number of votes. A run-off is expected to be held in

economy. Only one-third of its workers hold steady jobs. Inflation stands at more than 100% and the country is behind in paying off its foreign debt of \$13.8b. Although the APRA did not specify its plans for revitalising the economy, it is expected that it would encourage more protection for Peruvian industry and would hold down the amount paid each year to service the foreign debt. Garcia has also declared that he would by-pass the International Monetary Fund (IMF) which tried to introduce financial discipline, with little success, during the last administration.

ALBANIA

EMERGING FROM THE COCOON

April saw the death of one of those great men who rebuilt their nations in the traumatic years following the destruction of World War II—Enver Hoxha of Albania. But Hoxha who ruled Albania for 41 years, longer than any other leader in the Communist bloc, was not an ordinary leader: under him, the country just dropped out of history. In 1948, he sided with Stalin against Marshal Tito and cut off relations with Yugoslavia; in 1961, during the de-Stalinisation campaign, he broke with Moscow and in 1978, at the time when Peking was opening its doors to Washington, he expelled several hundred Chinese technicians from Albania. He also made Albania a fortress by mixing its borders with Greece, jailing thousands of Greek exiles, and building countless pill boxes to prepare for an invasion.

Although a staunch ideological follower of Hoxha, the new leader, Ramiz Alia, who has been the titular head of the state for the last three years, may favour some sort of a change. Moscow has already made it clear that it would like the strategically important country to return to its fold, but Alia is not playing: he even returned a telegram expressing condolences on Hoxha's death to Moscow, saying that it was unacceptable. Alia is also unlikely to make any pro-American moves. Instead, he has shown a tendency to look towards Europe—in recent times, a rail line was opened to Yugoslavia, and a road to Greece and ferry to Italy were also inaugurated. Albania is Europe's least developed country, but it mines copper and nickel and is the world's third largest producer of chrome after Russia and South Africa. Other European countries may, therefore, be interested in establishing trade links with Albania.

However, certain matters have to be cleared before the country can come out of its diplomatic cocoon, that is, if it wants to. It has no diplomatic relations with West Germany, because of a dispute over war-time reparations. It does not have diplomatic links with Britain either, because the British have refused to return the Albanian gold that fell into Allied hands at the end of World War II. They want to use it to settle western claims against Albania. Alia, however, has suggested that such difficulties can be overcome and western analysts feel that under Alia, Albania's isolation may end.

US-EUROPE

DIGGING THE GRAVES

President Reagan visited Europe in early May to attend the 11th economic summit of the seven nation non-communist industrial countries (the US, UK, France, West Germany, Japan, Italy and Canada). He also visited Spain and Portugal and addressed the European Parliament in Strasbourg, France. It was, however, his visit to West Germany that set off an acrimonious debate at home. It coincided with the 40th anniversary of V.E day, May 8. Chancellor Kohl who had been hurt at not being invited to celebrate the D-Day celebrations marking the anniversary of the Normandy invasion last year, took this opportunity to suggest that the victor should join hands with the vanquished. Reagan agreed to join him in appearing at a German military cemetery. The one problem was the choice of the cemetery: Bitburg, where 47 of Hitler's crack SS-troops are buried along with 2,000 other German soldiers who were killed during the Battle of the Bulge which had resulted in 100,000 German and 81,000 allied casualties. At first, it was assured that American soldiers, too, were buried at Bitburg, and White House aide, Michael Deaver who went to West Germany in February to work out the details did not spot the SS graves which were buried in snow or check the credentials of the dead.

It was only when reporters brought these graves to the notice of the American public that the cover was blown off Reagan's trip. American Jews and many World War II veterans including the American Legion were furious at the itinerary. Elie Wiesel, a Jewish scholar and former inmate of the Buchen Wald concentration camp, who received a Con-

the Nazis and the sufferings during the Jewish Holocaust, went before national television, with Reagan sitting by his side and expressed the sorrow of his community: "(We) implore you to do something else, to find another way, another site. That place, Mr President, is not your place. Your place is with the victims of the SS".

The President, however, stuck to his word although it meant the destruction of his support from American Jews, at least for the time being. To assuage their feelings, he added a visit to the concentration camp at Bergen-Belsen, where 50,000 Jews died under the cruelties of the SS. Kohl had earlier suggested a visit to another camp, Dachau, but the Americans had turned it down. The stop-over at Bergen-Belsen only served to increase the ire of the American Jews because they felt that it was a token gesture.

In Germany, too, the controversy created ill-feelings. The Mayor of Bitburg expressed their sentiments when he said: "Let the dead finally rest in peace". The Germans have borne a war guilt for 40 years and they feel that German soldiers, too, were victims of the Nazi dictatorship. The economic summit was conducted amidst the strictest security. The danger of an untoward event was real: just two days before, the police defused a six-kilo explosive device in the diplomatic area of Bad Godesburg. There were bomb explosions in two other German towns also. On the eve of the summit, two persons were killed and 13 injured when a van loaded with explosives was blown up in Brussels. Within the US, protests have begun in another sphere. The campuses, which had remained relatively quiet in the 70s are again stirring.

BRITAIN

THATCHER'S GLOBETROTTING

During the Easter week, PM Thatcher was out making a whirlwind tour of southern Asia, a region which had once played a key economic role in the British Empire. Britain is still interested in the economy of the region, and Thatcher's mission was to strengthen her political bonds with the heads of state and lay the groundwork for selling British contracts. Her ten-day tour took her through Malaysia, Singapore, Brunei, Indonesia, Sri Lanka, India and Saudi Arabia. Malaysia was perhaps her worst stop. Since Dr Mahathir Mohamad took over power in 1981, Anglo-Malaysian relations have reached a new low. Although the two leaders reached an agreement giving the Malaysian state airline an additional fifth flight to London, in return for easing Malaysia's discriminatory airport taxes on foreign carriers, Mahathir later threatened to pull his country out of the Commonwealth. In Indonesia, President Suharto warned her that trade restrictions in the industrialised world could lead to political unrest in the developing regions.

On the whole, however, the tour was judged successful for Britain and many leaders agreed to "Buy British". As for Thatcher, the Sultan of Brunei presented her with a five-piece solid silver service and a gold bracelet studded with diamonds and rubies; in return, she presented him with a silver salver—a good beginning for trade between the two countries.

PHILIPPINES

INCREASING INSURGENCE

Recently, Richard Armitage, the US Assistant Secretary of Defence warned that the Filipino New Peoples Army (NPA) could fight government to a 'strategic' stalemate. The insurgents operate on 59 "fronts" spread throughout the archipelago's 73 provinces. There are about 10,000 regulars and 10,000 part-time militiamen in the NPA. From their "fronts" or regions of influence, the guerrillas penetrate into government-held territories on "arms-grabbing" raids. Although its supporters are mainly peasants, the National Democratic Front (NDF), the political umbrella group that represents the insurgents has also recently begun attempts to attract the more affluent Filipinos to join the group.

Officially, President Marcos has tried to play down the threat from the insurgents. In April, he assured a group of visiting US Congressmen that there was no danger of a communist takeover in the Philippines. But at the same time, he has mounted a major counter-offensive and has earmarked \$55m to improve government services in rural areas where the insurgents are strongest. He has also launched a drive to improve the military image which was tarnished after the murder of opposition leader Benigno Aquino. Acting Chief of Staff Lt. Gen. Fidel Ramos has set up special committees to investigate reports of military abuse. So far 265 cars have been investigated and 85 soldiers punished.

The Reagan administration wants to support Marcos' efforts by giv-

ing Subcommittees on Asian and Pacific Affairs has, however, rejected the administration's request. In March it voted to increase economic aid to the Philippines from \$95m to \$155m, but offered only \$25m, in military funds. In another area, too, there is speculation about US military aid. Recently Son Sann, the leader of Khmer People's National Liberation Front and Norodom Ranariddh, leader of Kampuchea's Sihanoukist National Army guerrillas visited Washington to ask for help against the Vietnamese. After a meeting with Secretary of State George Shultz, Son Sann said that "The pipeline has been opened". However, what the US actually hinted at was that weapons may be forthcoming for the non-communist guerrillas, but not from the US. It is felt that the more likely sources would be Thailand and Singapore. America does not want to be directly involved in arms-supply in the region and thus jeopardize its relationship with Hanoi.

US-USSR

GLIMMER OF HOPE?

"He's a master of words and a master in the art of politics and diplomacy", said US House Speaker, Thomas P. O'Neill after he met Soviet leader Mikhail Gorbachov at a Kremlin conference recently, and indeed, Gorbachov has moved with remarkable speed since he took charge of the Soviet Union. In the diplomatic field, where he has relatively little experience, he took the White House unawares by launching a new peace offensive with his announcement of a six-month moratorium on the deployment of intermediate range missiles in Europe. He dared the US to join the Soviet missile freeze for the duration of the ongoing arms talks and said that this would halt the deployment of US medium-range missiles in Europe and stop research on the Strategic Defence Initiative ("Star Wars") of President Reagan. He also announced that the USSR would cut its nuclear armory by 25% if the US called off its "Star Wars" programme. If the Americans do not respond positively to this initiative, they will risk alienating their West European allies.

Meanwhile, East-West relations faced tensions as a result of the slaying of an American, Major Arthur D. Nicholson, Jr., by a Soviet soldier. The officer was on duty in East Germany as part of an agreement between Washington and Moscow that each side can maintain military observers in the two Germanys. The East bloc accused Major Nicholson of being a spy and offered no apologies. However, they did offer one concession; a ban on the "use of force or weapons" against American liaison mission patrols or personnel.

Despite tensions, the planned summit between Gorbachov and Reagan has not been called off although the time and place have not yet been specified. Recently, Reagan's son, Ronald Reagan, Jr., was in Moscow on a "private" visit, but analysts felt that the visit was significant in view of the agreement on holding a summit meeting. At the home front, too, Gorbachov has been moving fast. He has inducted three new members to the Politburo—Victor Chebrikov, Yegor Ligachev, and Nikolai Ryzhkov—who are all relatively younger technocrats like Gorbachov. In late April, he also submitted the outlines of the kind of reforms he would like to introduce to a plenum meeting of the central subcommittee. He emphasised cutting out bureaucratic waste through greater discipline and incentives for good work at the work place. He also wants to upgrade Soviet technology to international standards, partly through greater trade with Japan and West Europe.

EEC

EXTENDING THE UMBRELLA

The European Economic Community will welcome two new members, Spain and Portugal on Jan 1, 1986, raising the total membership to 12. Besides its economic impact, the decision is politically significant because it means that the two Iberian countries will become more firmly linked to the West European camp. Spain and Portugal will be given a transition period of seven to ten years, allowing them to adapt to the community's policies promoting the free movement of workers, capital and manufactured goods. Spain will receive a decreasing rebate of its value-added-tax contributions over six years, with the aim of limiting the initial cost of membership. Portugal was given \$900m by way of rebates and industrial loans to help it to correct its balance of payments deficit and to modernise industry.

Financially, integrating the two new members will prove a burden for the EEC. It had an estimated deficit of \$2b last year; it will have to come up with an additional \$1b every year to finance the membership of Spain and Portugal.

S.B.

GK. GK. GK. GK. GK. GK. GK. GK. GK. GK. GK.

YOU ASK, WE ANSWER

BY SHIV KUMAR

Who is Aga Khan? Why is he so popular? Please give detailed information about him.

Ramesh, Ranchi

Aga Khan is the title held by the spiritual leader (Imam) of the Ismaili sect of Shi'ite Muslims. Hasan Ali Shah (1800-81) was the first Aga Khan. The title was given to him by the King of Persia when Hasan was the Governor of Karman in Persia. Later, owing to differences between the Aga Khan and the King, the former left Persia and settled in India. The subsequent Aga Khans were Aga Khan II (died 1885), Aga Khan III (1877-1957). The present Aga Khan, Aga Khan IV (1936-), is President of the UN High Commission for Refugees.

What is (i) McCarthyism; (ii) Ku-Klux-Klan movement?

S. Krishnan, Madras

(i) **McCarthyism:** It is named after Joseph Raymond McCarthy (1909-1957), an American politician who investigated alleged communist influence and infiltration of the United States Government. McCarthyism refers to the practice of persecuting people who allegedly indulged in pro-communist activity. The accusation of disloyalty was often based on doubtful evidence.

(ii) **Ku-Klux-Klan:** It was a secret organisation formed in southern US after the American Civil War (1862-65) to suppress the newly acquired powers of the Negroes. The members of the Klan (Ku-Klux) tried to prevent Negroes from voting and even threatened sympathisers of Negroes. Soon some more groups committed crimes on Negroes in the name of the Klan. Another organisation of the same name was formed in 1915 in Georgia, professing Americanism as its objective and directing its activities against Negroes, Jews, Roman Catholics and others. Even in the early sixties they reappeared. The US Government in 1871 got enacted a bill called Forces Bill, enabling the President to suppress the Klan.

Explain the differences between (i) reserve forest; (ii) sanctuary and (iii) national park.

Manoj Sinha, Patna

(1) Reserve or protected forests are for the preservation of the climatic and physical conditions of the country. (2) Sanctuary is an area in which killing, hunting, shooting or capturing of any bird or animal is banned. (3) National Park is an area demarcated by law for all time for the conservation of scenery and natural and historical objects of national significance and also the wild life therein, and to provide for the enjoyment of the same without damaging it.

In Washington DC, what does DC stand for?

Subhash Bora, Yavatmal

DC stands for District of Columbia.

Are the World Bank, IMF and IBRD one and the same thing?

Banshi D. Shhipa, Jaipur

The World Bank was created in 1944 to assist its member countries in their reconstruction and development by extending loans to them. It is a specialised agency of the UN and its official name is International Bank for Reconstruction and Development. Hence the World Bank and IBRD are one and the same thing. The International Monetary Fund (IMF) is also a specialised agency of the UN but it promotes the stabilisation of world currencies and maintains a monetary pool from which member countries can draw loans to overcome their financial problems. Thus IBRD and IMF are two different institutions.

Are Delhi and Chandigarh capitals only or are they Union territories as well?

These two cities are Union territories as well.

What is Third World and how many countries are included in it? Are there any first and second worlds also?

Ramesh Pathania, Kullu (HP)

The term Third World denotes the under developed countries primarily from the Asian, the African and the South American continents (but does not include oil exporting countries of these three continents). The oil exporting countries are some times known as the fourth world but the term is not used frequently. The US and its allies are called the first while the communist block is called the second world.

What is the Bermuda Triangle?

It is an area off the southern coast of Florida in the Caribbean Sea. A number of aeroplanes and ships have disappeared in this area under mysterious circumstances. Only a few pilots or captains radioed distress signals. Bodies or wreckages were seldom found. It is believed that unexpected storms or downward air currents destroy the ships and the aeroplanes.

The Bermuda Triangle is scattered in a 1,140,000 km area. For detailed information, please read the book *The Bermuda Triangle Mystery Solved* written by Lawrence Kusche. The book was published in 1975 in the US.

Many books have included Ireland in the UK while some have shown Ireland as a separate country. Please explain.

J. Paricha, New Delhi

By the Act of Union, 1801, Great Britain and Ireland formed a union. But in April 1916, the southern part of Ireland declared itself an independent country with Dublin as its capital. The northern part of Ireland has remained with the UK till today.

Who was the British PM at the time when India, Burma and Sri Lanka got independence?

Sunil Gandhi, Kanpur

Sir C.R. Attlee (1945-51) was the British PM.

What does the sign KBK in almost all diagrams, graphs and statistical tables stand for?

MT Puttaraju, Bangalore

KBK is a Delhi based company making diagrams, graphs and statistical tables.

When was Sunday recognised as a public holiday?

Ravindra Amatya, Lucknow

It was recognised as a public holiday in 17th century England.

In which years were the CIA, RAW and KGB established?

The CIA was established in 1945, KGB in 1954 and RAW in 1967.

How does a deputy minister differ from a minister of state?

R. Sudhakaran, Nasik (Maharashtra)

A deputy minister functions under either a Cabinet rank minister or a minister of state, whereas a minister of state assists a Cabinet rank minister.

However, at present Rajiv Gandhi's Council of Ministers has only Cabinet ministers and ministers of state. There is no deputy minister in the Centre at present.

Please let me know about the national anthems of other countries and the names of the persons who wrote these.

N. Mahendra, Coimbatore

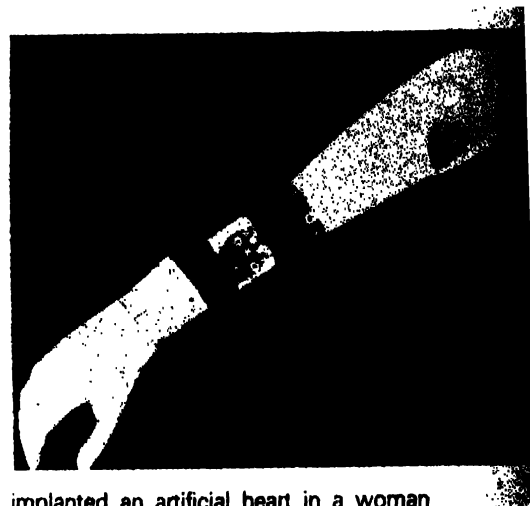
For your query please consult the book *National Anthems Of The World* edited by Martin Shaw & Others and published by Blandford Press, Great Britain.

BIO-MEDICAL ENGINEERING

BY UDAY K. CHAKRABORTY



Above : Motional rescue: A polio victim demonstrates a multi-channel proportional unit. Above right : Stumped in : The myoelectric control system for below-and-above-the-elbow amputees consists of five electrodes, connected to the amputee's stump, which sense control signals from muscle contractions and thereby produce electrical activity.



More than a year has passed since Dr Barney Clarke was rushed to the University of Utah Medical Centre (US) for an artificial heart implant. Today, although a moratorium is in effect on the implanting of the device in a second human, researchers in many countries are working with renewed vigour to develop various artificial organs.

Artificial skin... bone replacement material... prosthetic devices for the disabled... mechanical and electronic aids for paralytic patients.... The spotlight is on these and other biomedical devices, techniques and materials scheduled for—or already undergoing—clinical trials. Some of the devices are even commercially available today, albeit on a limited scale. While 'superhuman' bionic people may not be on the horizon, certainly most of us can count on some of our worn-out parts being replaced with these artificial alternatives during our lifetime.

Behind the most recent crop of biomedical engineering developments are years of research efforts put in by professionals from different fields. Let's take a look at this fascinating art and the human replicas that have been created.

Left-Ventricular Assist Device (LVAD)

The LVAD is a duplicate of the left ventricle, the main pumping chamber of the

four-chambered human heart. LVADs are essentially temporary devices designed to keep alive patients whose hearts are too weak to resume beating on their own when they are taken off the heart-lung machine after undergoing open heart surgery. When hooked up to the patient's heart, an LVAD takes over the blood pumping function, letting the heart muscle rest until it resumes its work spontaneously. This usually takes several days. Presently available devices are big, and operated by external power sources. Researchers are trying to develop self-contained miniaturised LVADs.

Artificial heart

Work on the artificial heart gained momentum in the beginning of the last decade, thanks to the efforts of American, European and Russian researchers. First trials were made on several calves which lived from 60 to 268 days. One is still alive one and a half years after the implantation. In May 1981 a team of doctors

implanted an artificial heart in a woman who had been declared 'brain dead'. The device kept the woman's kidneys functioning and maintained blood pressure for a few hours. Then came the spectacular breakthrough on Clarke a 61-year-old dentist. The success of the operation was above the expectations of even the most conservative experts. The operation was performed at the University of Utah Medical Centre, USA, by a medical team led by Dr Robert Jarvik and William DeVries. Clarke lived with the artificial heart for 112 days, before he died on Mar 23, 1983.

But, today, a lot of heart-searching is going on as a result of the climate of ethics that now guides medical research in Western countries. Even the institutional review board of the University of Utah Medical Centre placed a moratorium on the implanting of the next artificial heart in a second human, although private funds are assured for at least two more artificial heart experiments—the first cost more than \$250,000. In fact, the application of new therapies is no longer strictly a private medical problem but involves thorny social, economic, ethical and political factors. Few medical developments combine these elements in a more vivid way than does the artificial heart and in few or more is the price of error so high, or the urgency to get everything right the first time more pressing. The plastic heart implanted on Clarke, code named 'Jarvik 7', was driven by a 170 kg wheeled unit. All agree, however, that the development of a fully implantable and permanent artificial heart

source, longevity of the power source and reliability. The power source should have enough storage capacity to remain implanted without the need for frequent changes. If the power source must remain outside the patient, a way for transmitting energy to a motor inside the body must be found. Moreover, the device should be able to remain in body's saline environment for a long time and there should be some ways to dissipate and absorb heat released by such an implanted device.

Artificial bone

Much needed bone material to supplement the human body's limited potential for providing its own bone grafts is also a reality. The famous Battelle Columbus Laboratories in the US have developed biodegradable ceramic based on tricalcium-phosphate, which has been working as a scaffolding for bone cells during clinical trials. When the ceramic is set in place, cells from the surrounding bones migrate through its pores. Both sides are reconnected through ceramic, which functions as a structural support. The body's natural absorptive capacity degrades the material within one to one and half years, leaving new bone in its place. Not strong enough for use in long bones, the ceramic is being tested in skull repair and jaw rebuilding jobs.

Biomedical scientists have recently discovered that a coral-skeleton can be used as mould for casting versatile, super strong new material that may be just what is wanted for prosthetic devices that could replace damaged joint cartilage. Sufferers of some types of arthritis stand to benefit from the new material. Human bone cartilage cushions and lubricates joints. If a section of the cartilage is damaged by disease or accident, a replacement can be cut from a new material created by casting a coral skeleton. The new part, a two-faced prosthetic device, is surgically inserted. The lower half of the material permits bone ingrowth; the upper half, because it is cast with polymers, mimics cartilage providing cushioning and lubricating service.

Artificial blood

Perfluorochemicals—hydrocarbons in which fluorine has been substituted in place of each hydrogen atom—possess a characteristic value for the human body: they have an affinity for oxygen that is about two and a half times as great as that of whole blood. In addition, they are relatively inert, can be administered regardless of patient's blood type, and stored (albeit frozen) for extended periods.

Artificial skin

Human skin protects the body from invasion by such agents as bacteria and viruses, and regulates body temperature

especially from burns, often exposes patients to greater dangers than those resulting from injury itself. Skinlike protection during the healing process can be provided by grafts from the patient's own skin, or from cadavers or animals (usually pigs). But grafting the patient's skin requires surgery, and if the loss is extensive, there may not be enough skin left to graft. Cadaver skin is not always available and lasts three to four weeks before the body rejects it. And, animal skin lasts even less (about one week).

In a recently developed method, researchers close open burn-wounds with a two-layer artificial skin made of a silicone-rubber-like top layer bonded to a porous underlayer made of collagen and a synthetic material. When placed over a wound, the artificial covering acts as a barrier against bacteria, while allowing a moisture spread rate approximately the same as that of real skin. During healing, cells and fibroblasts migrate to an area between the artificial skin's two layers; the wound is closed when the bond between the layers is broken. At this point, the top layer peels off, while the bottom one is degraded by tissue enzymes.

Help for paralytic patients and the disabled

Biomedical engineers have also developed various control devices for restoring movement to paralysis victims. Even patients who are paralysed from neck downward would be able to use their hands with these sophisticated devices comprising electrically operated arm brace and tongue-switch control. One recently demonstrated device is controlled by a sensitive tongue pressure switch. The patient achieves complex movement and direction by touching with his tongue a series of protruding switches resembling large vitamin pill capsules.

In addition to this, research and development into producing electrically operated limb prostheses (arms, legs, knees, elbows, etc) for amputees and disabled persons is accelerating, with some prostheses now becoming commercially available for use.

Control drug release devices

Several implantable devices that automatically deliver controlled doses of medication over long periods of time are about to begin clinical trials. These devices will help in solving the problem of supplying concentrated drugs to a particular part of the body. These would also help avoid overdosing of drugs and its side effects on other parts of body. Among the potential uses are the delivery of birth control drugs, narcotic antagonists (to block the effects of narcotics in drug addicts), anti-cancer

swallowable micro-sized pills coated with some sort of iron-based material. The doctor guides the pills, which travel through the bloodstream, with a magnetic device and takes it straight to the cancer-affected zone. Then, with a remote control device, the doctor makes it burst and release the concentrated dosing. This device will be very helpful for treating patients with cancer of liver, pancreas, etc.

Responding to the needs of diabetics, researchers have developed and implanted other types of systems, involving use of pumps and reservoirs, for insulin release. The patient can adjust the insulin release rate by using a switch. Enough insulin for more than a week is stored in a refillable reservoir. One drawback is the system's fixed delivery rate (the pancreas secretes varying amounts of insulin, depending on the blood's glucose content). Research is focusing on the development of a workable glucose sensor, but, meanwhile, efforts are being directed towards putting micro-chip circuitry in the delivery devices. This would allow a more sophisticated programming of varied dosage rates. Researchers are also trying to miniaturise the systems.

In addition to the above, researchers are also developing and taking clinical tests on many parts of the human body like artificial hip joints, the pancreas and replacement parts for the eyes and the ears. However, there are problems that have to be overcome. The insertion of foreign materials into the human body inevitably poses problems of biocompatibility or safety. Since the defences of the body are organised to remove or attack any foreign object in contact with internal body element, an acceptable biomaterial or replacement element in one that causes only minimal foreign body reactions. It must also be non-toxic and non-carcinogenic. Further requirements depend on the specific application. For cardiovascular use, for example, the material must not damage blood or encourage clotting. For resorbable implants, the biodegradation products must be non-toxic and readily eliminated from the body by normal metabolic and excretory processes.

Biomedical engineering today is a field that combines the skills of many professionals such as doctors of medicine, biologists, chemists, chemical engineers, mechanical engineers, electrical and electronic engineers. Through their concerted efforts, rapid progress has been made in the development of artificial materials and devices. And, prosthetic devices to supplement or replace the function of many parts of our body are expected to be a reality by the turn of this century.

CAREER COUNSELLING

BY G. J. UNNITHAN Director, Students Advisory Bureau, University of Rajasthan

I have done M.Sc. Physics with specialisation in Electronics. I want to do Television Engineering course from some reputed institution which gives adequate training facilities to its students. Kindly give details about such an institute, government or private, which conducts six to nine months training. Also give details about the admission criteria.

L.M. Kothiyal, Pauri Garhwal

Please contact Roorkee University, Roorkee-247 672 which conducts a postgraduate diploma in Television Technology.

I am a final year M.A. English student and wish to do M.Phil. in the subject. Which universities offer the course?

Bhupendra Kumar Patel, Bilaspur

Some of the universities in the north offering the M.Phil. course in English Literature are: University of Rajasthan; University of Delhi; Jawaharlal Nehru University, Delhi; Himachal Pradesh University, Simla; Maharshi Dayanand University, Rohtak; Guru Nanak Dev University, Amritsar; Punjabi University, Patiala; Panjab University, Chandigarh; Banaras Hindu University, Varanasi; Meerut University.

I want to pursue my postgraduate Engineering studies in West Germany. What's the procedure regarding entrance tests, scholarships, etc?

H.S.C. Shekhar, Pune

Write to the German Academic Exchange Service, 176 Golf Links, New Delhi-110 003 asking for a copy of the booklet *Academic Studies In The Federal Republic Of Germany*. Knowledge of German is a prerequisite for admission to German universities.

I am a 28-year-old Arts graduate from Bombay University and wish to study French in detail and take up a translator's job at home. Is it possible?

V. Varma, Bombay

Courses in French are offered by the Alliance Francaise in Bombay and upto the M.A. level at Bombay University, besides certain private institutions. For translation work advanced knowledge of French will be required plus an equally high level of English proficiency. The Central Institute of English and Foreign Languages, Hyderabad-500 007 has a translator's course in French. Translation work can be done on a private basis at home. Please contact the Alliance Francaise in Bombay for details of courses.

I am an M.Sc. Botany student with specialisation in Cytogenetics and Plant Breeding. What are my prospects of continuing study/research? Are there any scholarships offered by the government or universities?

Sumen Rai, Mathura

In your subject there are facilities for research in most universities and agricultural research institutes. Scholarships are provided by the Indian Council of Agricultural Research (ICAR), Council of Scientific and Industrial Research (CSIR), University Grants Commission (UGC) and the universities themselves.

I wish to take up the job of a news reader or programme broadcaster, telecaster on Doordarshan or All India Radio.

Rajiv Srivastava, Kanpur

Please contact the nearest Doordarshan/Akashvani station and enquire about audition tests.

My brother wants to do postgraduation in Ophthalmology or Gynaecology from a reputed institution in India. Please mention the names of the institutions concerned.

Rupal Deka, Jalukbari (Guwahati)

The 1984 *Handbook Of Medical Education* may be obtained from the Association of Indian Universities, 16 Kotla Road, New Delhi-110 002 by sending an M.O. for Rs 18. This contains details on all postgraduate courses.

I am a student of Pre-Engineering. How can I join the Atomic Power Energy course?

Uttam Singh, Amritsar

This training is available at the post-B.E. or post-M.Sc. level at the Bhabha Atomic Research Centre, Trombay. Engineering graduates in Mechanical/Electrical/Electronics/Instrumentation/Chemical and Metallurgy with 655 marks or M.Sc. holders in Physics/Chemistry with 60% marks are eligible for a one-year orientation course in Nuclear Science and Engineering. After successful completion of the course, candidates will be appointed as scientific officers in any of the units/projects of the Department of Atomic Energy. A stipend of Rs 1,400 per month is offered during the training period.

I have passed class X exam but could not clear the class XI board exam conducted by the Central Board of Higher Secondary Examination. I am 28 years old and wish to pursue higher education through the open university

programmes offered by some universities.

G. Vijaykumar, New Delhi

The Andhra Pradesh (AP) Open University, 6-3-645 Somajiguda, Hyderabad-500 004, offers direct admission to B.A./B.Com. and B.Sc. courses, on the following conditions:

(i) If a candidate does not possess the formal educational qualification (intermediate or its equivalent) or as a matter of fact any educational qualification, he is eligible for admission, provided, he has completed 20 years of age. However, he has to pass the Eligibility Test conducted by the AP University held usually in May.

(ii) If a candidate has passed the Intermediate exam conducted by the Board of Intermediate Education, AP or its equivalent and has completed 20 years of age by Jun 1, he is eligible for direct admission to the B.A. and B.Com. courses. He need not appear for the Eligibility Test.

(iii) A candidate is eligible for admission to the B.Sc. course if he has completed 20 and passed the Intermediate exam with science subjects conducted by the Board of Intermediate Education, AP or its equivalent. There is no Eligibility Test for admission to the B.Sc. course.

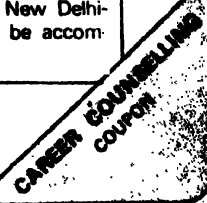
I want to join the Indian Air Force. Kindly give me some details on Pilot Aptitude Test.

Manoharlal, Simla

The Pilot Aptitude Test is administered as one of the first tests during the Service Selection Board Exam for candidates desirous of joining the Air Force and who have passed the UPSC exam. This is an exacting manual test conducted to judge the candidate's required hand-eye coordination. Only one chance is given to pass this test. ■

NOTE TO READERS

Before rushing in your career problem, check if it can be solved by looking up our sections on *Careers* or *Career Counselling* in the earlier issues. Space is limited; the mail received staggering. Letters chosen are those of general interest or in particular cases where the information is hard to find or has not been published before. Many readers ask for a personal reply. Sorry, this is not possible. So please don't send postage or envelopes. Make your queries specific and brief. Send them to Career Counselling, Career & Competition Times, 10 Daryaganj, New Delhi-110 002. Your letters should be accompanied by the coupon.



DISABILITY AT THE HELM-2

BY M.S. VENKATARAMANI

A head of state or government takes a solemn oath to discharge the powers and duties of his high office in a prescribed manner. If his physical or mental faculties get impaired, the issue concerns not only his family and the doctors with whom he takes counsel, but the people and the entire machinery of the government. The case of President Woodrow Wilson brings into sharp focus the complexities of the problem that a country would confront in the absence of well-established procedures.

Mrs Wilson claimed many years later that she had acted during the period of the President's illness in the best interests of the American people and in full consonance with the advice tendered to her by the eminent specialist who had been brought in by Wilson's personal physician. The specialist told her that her husband's recovery could not be hoped for unless he was "released from every disturbing problem". Resignation from the presidency should not be considered since that would remove "the greatest incentive to recovery" and also prevent the completion of the great tasks that the President had undertaken. The doctor's "prescription" deserves to be cited in full:

"Madam, it is a grave situation but I think you can solve it. Have everything come to you; weigh the importance of each matter and see if it is possible by consultation with the respective heads of the departments to solve them without the guidance of your husband. In this way you can save him a great deal. But always keep in mind that every time you take him a new anxiety or problem to excite him, you are turning a knife in an open wound. His nerves are crying out for rest, and any excitement is torture to him."

Mrs Wilson apparently did not require much persuasion to accept the counsel of the doctor. Thus it came to pass that Cabinet members were forced to communicate only with Mrs Wilson and to receive instructions which, according to her, came from the President.

When after a lapse of eight months a Cabinet meeting was finally held in the White House with the President in the chair, no meaningful business could be transacted. "It was enough to make one weep to look at him," one Cabinet member recalled subsequently. The President appeared to be unable to take the initiative and, when bewildered Cabinet members began discussing a problem, Wilson appeared to have difficulty in fixing his

suggested that we had better go," according to the Cabinet member. It was to become a familiar routine in the few deulatory Cabinet meetings that were held during the remaining months of the Wilson administration.

The Garfield and Wilson episodes led to infructuous efforts by some members of Congress to push for legislation to deal with the problem of presidential disability. Eventually it was left to President Dwight J. Eisenhower to demonstrate a manly sense of responsibility to the country and the people. Reflecting sombrely on his own spells of partial incapacitation, Eisenhower wondered about the predicament in which the country could be placed if a President were to be, as he put it, even partially "incapable of analysing difficult problems and making reasonable decisions concerning them." He posed squarely to himself the question whether it was not possible that an ailing President could become "unable to express his thoughts... unable even to express a decision to resign". He decided that he should forthwith spell out the arrangements that should be followed in case he were to become seriously or permanently disabled. He embodied his suggestions in a letter to Vice-President Richard Nixon.

Eisenhower said that if at any point he could clearly recognise his own inability to discharge the duties of the presidency, he would immediately so inform Nixon. It would then be Nixon's exclusive responsibility to determine whether the disability of the President was such as to make it necessary for the Vice-President to discharge, as "acting President" the powers and duties of the presidency. Eisenhower expressed the hope that in taking his decision, the Vice-President would consult the Secretary of State, the President's senior-most special assistant, his personal physician, and a group of medical experts. The arrangement would end whenever Eisenhower decided that it was proper for him to resume the powers and duties of the presidency.

Eisenhower's integrity is shown by the fact that he proceeded in his letter to instruct Nixon on the action to be taken if the President were to be so disabled as not even be in a position to communicate anything to the Vice-President. Ike wrote:

"If any disability of mine should, in the judgement of any group of distinguished medical authorities that you might assemble, finally become of a permanent character, I would, of course, accept their decision and promptly resign my position. But if I were not able to do so, and the same group of consultants would so state, then you should take over not only powers and duties but the perquisites of the pre-

sidency. I am sure that you will be able to carry off a drive for a constitutional amendment to deal with the issue of presidential disability. The 25th Amendment, enshrined in the US Constitution in 1967, contains the following provisions: 1. The Vice-President will become acting President whenever he, and a majority of the Cabinet or such body as Congress may set up, transmits to the President, pro tem of the Senate and the Speaker of the House of Representatives a written declaration that the President is unable to discharge the powers and duties of his office.

2. The Vice-President's role as acting President will end when the President sends a written declaration to the same two congressional presiding officers that no disability exists.

3. However, if within four days of such a presidential communication, the Vice-President and a majority of the Cabinet or such body as Congress may set up, file a written declaration with the congressional presiding officers contradicting the President's claim, Congress is required to convene within 48 hours.

4. Congress is further required to decide the issue within 21 days. If by a two-thirds majority of both Houses, the written declaration submitted by the Vice-President is endorsed, he will continue as acting President. Otherwise the President will resume the powers and duties of his office.

Since the American people have become used to the existence of the 25th Amendment and aware of its provisions, uncertainty and confusion did not grip the nation when President Ronald Reagan was seriously injured by an assassin's bullet a few years ago. The hasty assertion by Secretary of State Alexander Haig that he was "in charge", only brought derision on his head and put him on the slippery slide towards oblivion. It was not Haig but the Constitution of the US that was seen by the American people to be "in charge".

It may be argued that ours is a parliamentary system where a CM or a PM does not hold office for a fixed, constitutionally-prescribed term. The legislature party that elected him as its leader could replace him with another if he were to become disabled. While the system is expected to function in this fashion, the confused situation that developed in Tamil Nadu recently is a danger signal. A similar state of uncertainty in the event of a prime ministerial disability may subject our system to enormous strain. If the country is to be safeguarded against that kind of a problem, we must evolve and adopt unambiguous procedures appropriate to our parliamentary system.

(Concluded)



THE RIGHT APPROACH TO MENTAL ABILITY AND QUANTITATIVE APTITUDE

BY EDGAR THORPE

Come off it exam-takers, be reasonable and face facts. Mere book knowledge is no knowledge. At least not in today's world which rotates on the axis of applied knowledge. All your theoretical study would deem to have educated you only if you have the ability to see through reason; can tackle problems in a jiffy; and are able to take snappy decisions. Hence this exercise in intelligence, comprising the theory and practice of problems on arithmetical reasoning and time sequence, coding and decoding, completion series, verbal analogies, table and graph reading, etc, which should mentally prepare you, reasonably well, for any forthcoming exam.

Taking the right decision, at the right time and place is important, particularly for those in top administrative positions. Quick decision-making requires mental alertness and the ability to quickly interpret data, establish logical relationship, arrive at the correct conclusion, make the right judgment and also plan carefully for the future. Therefore, mental ability and quantitative aptitude tests are being extensively used by the UPSC, Central/Regional Banking Recruitment Boards and other recruitment agencies hired by various private and public sector organisations, while selecting candidates for top administrative posts. These tests are known by various names, viz, Intelligence Tests, IQ Tests, Reasoning Tests, Mental Ability and Quantitative Aptitude Tests. However, all these tests are meant to judge the candidate's intelligence and his degree of mental ability.

Meanwhile, one's mental ability is not like measuring the length of a road or the size of a plot, because when tested at different times the same person can score differently. Also, an individual often scores very differently in different types of intelligence tests. Hence, it is not fair to judge an individual's mental ability on the basis of one type of intelligence testing scale or one set of intelligence questions. True, a person may have general intelligence 'g' which affects his score in any kind of test. But aptitudes vary from person to person. Some have scientific or technical ability and others verbal ability and numerical ability. One who has numerical or verbal ability will excel in solving problems involving quick calculations,

graph and diagram interpretation, etc. This is a special ability. But it is his general ability which will enable him to solve other problems.

It is for this very person that most of the intelligence tests, used for selection purposes, attempt to mix different kinds of problems in order to test a candidate's general ability 'g' and at the same time judge his numerical and verbal abilities. Indirectly, these tests measure the candidate's intelligence and aptitude.

Intelligence is directness of thought, capacity for making adaptations, and auto-criticism. It is the ability to adapt oneself to new situations and to carry on abstract thinking. Plato was the first to debate on this important attribute. He said that everyone had an appetitive part in him, an impulsive side to his nature. There was also an element of thought or reasoning in people. This also involved the ability to learn and denote an innate ability, which was present right from birth in an individual, viz., to react to different problems and find ways and means of solving them in the shortest possible time. The last two attributes of intelligence are measured through intelligence tests.

Aptitudes are special skills, knowledge and interests. Aptitude tests attempt to measure the potential of these special abilities. An aptitude is a combination of characteristics indicative of an individual's capacity to acquire (with training) some specific knowledge or skill, e.g., ability to do technical work, accounting work, etc. An aptitude test, therefore, is one which is designed to measure a person's potential ability in an activity of a specialised kind and within a

restricted range. The Quantitative Aptitude tests, which are very common for administrative positions, are used to measure the candidate's ability to reason through and understand quantitative concepts and relationships, while verbal ability is indicative of his general academic standard.

Therefore, Mental Ability tests are designed to measure intelligence whereas Quantitative Aptitude tests are designed to measure special skills, knowledge and interest of the candidate.

In this feature an attempt has been made to include all possible kinds of verbal and non-verbal Mental Ability and Quantitative Aptitude tests which can form a part of the Mental Ability and Quantitative Aptitude test papers in the IAS or Bank exams, including competitive exams conducted by the Defence Forces Recruitment Boards. To be successful in any exam, it is essential to familiarise oneself with the pattern of the respective test papers. It is not necessary that all those questions included in these sample test papers would be asked in your exam. However, by critically analysing the previous years' test papers, an effort has been made to project the trend that is prevailing in these exams. It is noticed that except for one or two items (which are added or deleted), the general format and types of questions asked remain more or less the same. Based on this conclusion, we have included here all such questions which may be expected in the competitive exams. Methods of solving these questions quickly and correctly have also been worked out along with solutions.

MENTAL ABILITY

NON-VERBAL TESTS

Non-verbal tests are those tests in which use of words, figures, digits and letters of alphabets are not freely made. Here the knowledge of words, their meanings and usage is not required but one's power of logical reasoning, quickness of thinking and the ability to differentiate or find correlations between given objects/figures is of great importance. In these tests, diagrams, figures and designs are extensively used which helps to evaluate the candidate's mental set-up and ability rather than his academic knowledge and performance.

Originally these tests were designed by Prof Binet. He designed non-verbal intelligence tests to judge one's power of memory, the nature of mental images, imagination, attention, comprehension, suggestibility, aesthetic feelings or sense of appreciation and visual judgment. In 1905, Binet and his colleague, Simon, devised the Binet-Simon scale which was used to identify differences in mental development—in degree or brightness or dullness—with differences in the fields of development as represented by the average group of people. Most of the competitive exams today use non-verbal intelligence tests which are fundamentally based on the Binet-Simon scale.

The most commonly used non-verbal tests are: Analogies: Series completion; Spotting similar patterns; Arranging figures in proper sequence; Spotting the odd one out; Pattern completion; Spotting hidden figures; and miscellaneous verbal tests.

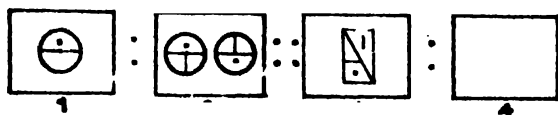
ANALOGIES

The dictionary defines 'analogy' as similarity or process of reasoning from parallel cases. These are also called relationship tests. The figures are presented in two sets: one is called Problem Figure and the other Answer Figure. The problem figure consists of two sets; the first set has two units marked 1 and 2 (sometimes separated by the sign:) and the second set (which is sometimes separated from the first set by the sign:), also has two units marked 3 and 4 (sometimes separated by the sign:). The figures in the first set bear a certain analogy or relationship with each other. The same relationship is reflected in the third figure of the second set. The fourth unit is either blank or contains a question mark (?). You have to choose from the set of answer figures marked A, B, C and D (sometimes E also), one figure bearing the same analogy as in first unit to fill the blank column or replace the question mark.

Directions: Study the first two figures of Unit 1 in Problem Figure set. Establish the relationship between them, which may be of: size/shape/direction/rotation/numbers/or sequence. Study the first figure of Unit 2 of Problem Figure. Compare it with first figure of Unit 1 and then try to find out the relationship by comparing it with figure 2 of Unit 1. Find the suitable figure having all those qualities/characteristics which are in figures 1, 2 and 3, from the Answer Figure choice. See example below:

Find the relationship/analogy in the first set of Problem Figure. Based on the same analogy find the suitable figure from Answer Figure to fit into the blank space.

Problem Figure.



Answer Figure



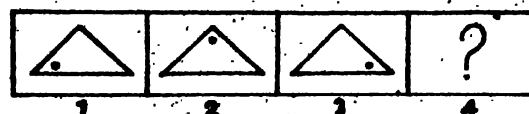
Answer: B—In the first two columns you will note that the number of circles have increased from 1 to 2 and in the second column one of

Classification

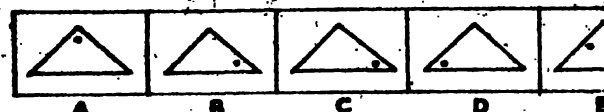
Non-verbal analogies may be further classified as follows:

Rotative relationship: The various elements given in the diagram (dots, arrows, circles, squares, triangles, etc.) rotate in a certain specific direction, e.g., clockwise; anti-clockwise; once clockwise and then anti-clockwise and vice versa; first left to right or right to left; or once to left and then to right or vice versa. See example below:

Problem Figure



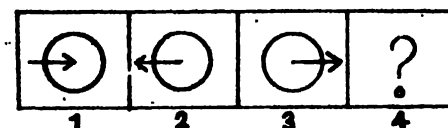
Answer Figure



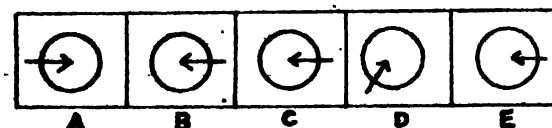
Answer: The dot is moving clockwise inside the triangle from one angle to the other.

Directional relationship: The elements in the diagrams move from one direction to the other: left to right or vice versa, up and down and vice versa, from one side to the other, etc. See example below:

Problem Figure



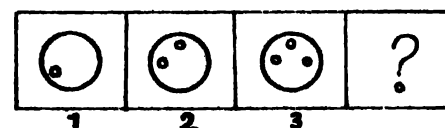
Answer Figure



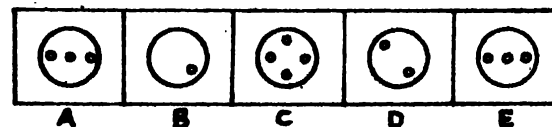
Answer: C and E—The arrow is moving from right to left.

Quantitative relationship: In such analogies, the relationship of increasing/decreasing (addition/subtraction) exists. The elements in the diagram either increase consecutively or decrease or alternately increase/decrease. See example below:

Problem Figure



Answer Figure

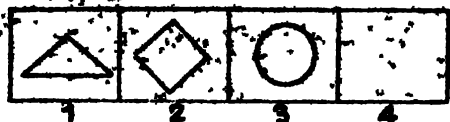


Answer: C—The small circles inside the large circle are increasing or decreasing in a specific direction.

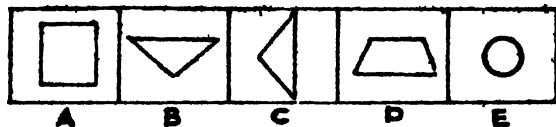
Qualitative relationship: In such analogies, the diagrams (symbols) have a certain relationship. For instance:

- Angles/Circles/Squares/Parallel/Perpendicular
- Nature of diagrams (mathematical signs, geometrical figures, designs of plants/animals, road signals, alphabet/Arabic numbers, etc.)

Problem Figure

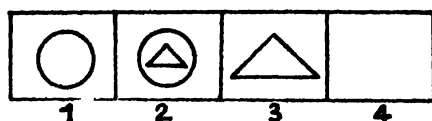


Answer Figure

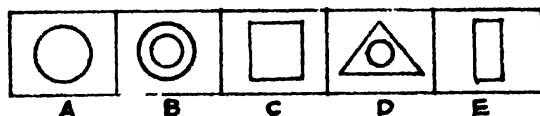


Answer: D—All figures in the problem unit are different in characteristic and figure A in the answer unit presents that relationship.

Positional analogies: In such analogies the position of the elements change or interchange in a specific direction/order. See example below.



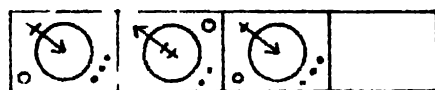
Answer Figure



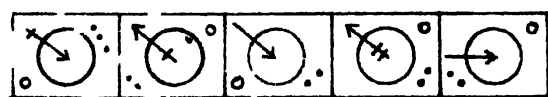
Answer: D—The position of circle/triangle changes and interchanges.

Multi-relational analogies: In such questions there are several terms in the diagrams which change in a definite relationship with each other (qualitatively/quantitatively/directionally/natural etc). See example below.

Problem Figure



Answer Figure



Answer: D—Note the movement of smaller circle within the square, direction of the arrow inside and outside the large circle, increasing and decreasing number of dots outside the large circle.

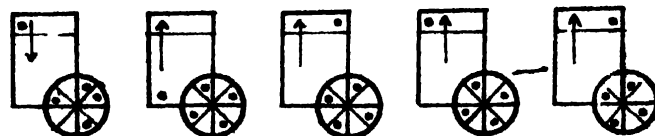
SERIES COMPLETION

In this type of non-verbal tests, two sets of figures pose the problem. The sets are called Problem Figure and Answer Figure or Answer Pattern. Each Problem Figure changes in design to the preceding one. The Answer Figure set contains four or five figures marked A, B, C, D and/or E. The candidate is required to choose the correct answer figure which would best continue the series. These tests are based on Pattern Perception Tests originally devised in England by L.S. Penrose.

Directions: Study the Problem Figures carefully and try to establish the relationship between various units. From the answer choice, pick out the figure which is appropriate to complete the series. For example:



Answer Figure



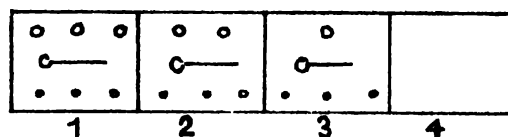
Answer: D—Note the movement of the dot in alternate figures. The movement of the dot in the circle is rotating clockwise leaving one column blank each time. The dot in the upper portion is moving from right to left alternately. Based on these parameters, figure D fits in the blank column in the Problem Figure.

Classification

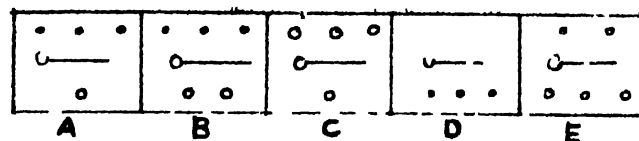
Series completion tests may be classified as follows:

Quantitative type: In such questions, the items/elements decrease consecutively, increase consecutively, increase/decrease consecutively, or alternative quantitative relationship exists. In other words, the numbers of various items increase/decrease. See example below.

Problem Figure

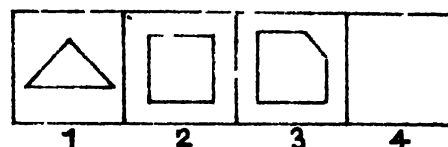


Answer Figure

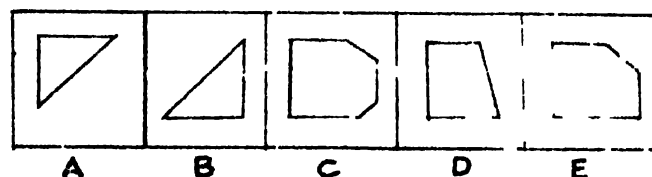


Answer: D—The dots are constant but small circles are decreasing one by one.

Qualitative series: The qualitative characteristics of various elements change to complete the series. See example below.

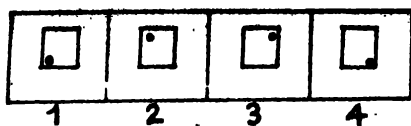


Answer Figure

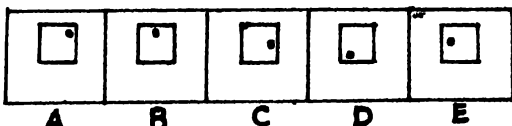


Answer: C—All figures have lines which are increasing in subsequent figures, i.e., one line is being added in each subsequent figure.

Rotative/directional series: In each figure of the series, the various elements (items) move in a specific rotation or direction. The blank column has to be completed keeping in view the movement/sequence.



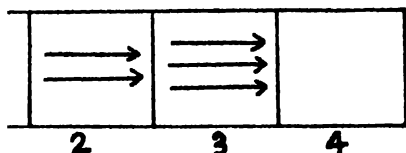
Answer Figure



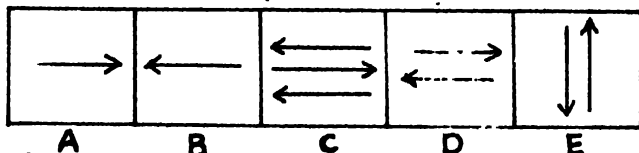
Answer: D—The dot is moving in a specific direction.

Ratio-based series: The first and second figures in the Problem Figure are the same. The third and fourth figures should have the same ratio to complete the series. See example below:

Problem Figure



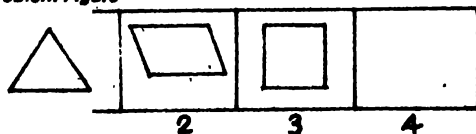
Answer Figure



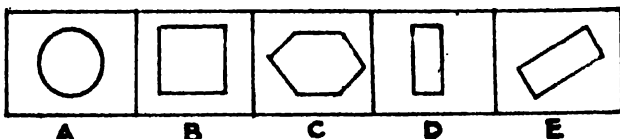
Answer: A—The ratio of figures here is 1:2:3 and it should follow the same pattern to complete the series. Hence, 1 should come after 1:2:3.

Structural series: There exists a structural relationship in figures of the series. The figure from Answer Figure should bear the same structural relationship to fit into the blank column of the Problem Figure. See example below:

Problem Figure



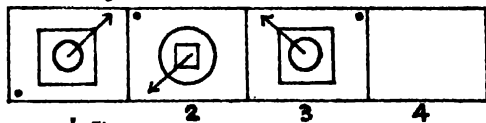
Answer Figure



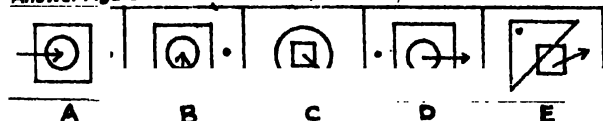
Answer: C—The figures have structural relationship, i.e., triangle, square, pentagon and hexagon. Other figures in Answer Figure are different in characteristic except C.

Multi-relational series: In such questions, there are several elements (items) in the diagrams which keep on changing in a definite pattern. There can be additions/reductions of elements. See example below:

Problem Figure



Answer Figure

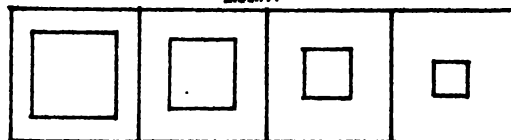


SPOTTING SIMILAR PATTERNS

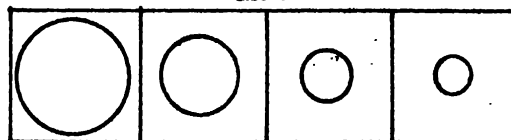
Quickness of thinking and mental ability to differentiate between forms is essential to solve these problems. There are three blocks of designs given in each question marked Block A, Block B and Block C. Figures in Block B bear some similarity to figure in Block A, but have an essential point of difference as well. The candidate has to select two figures in Block C which bear maximum similarity to figures in Block A, with the help of block B. See example below.

There are three blocks marked A, B and C. Two figures in Block C have some similarity with the figure/pattern in Block A. In Block B there are some figures that match those in Block A or have similarity/same analogy. Select two figures in Block C which bear similarity to or are based on the same analogy as those in Block A. Block B will help in determining the correct answer.

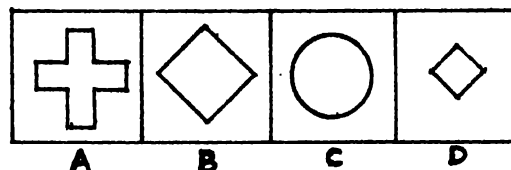
Block A



Block B



Block C

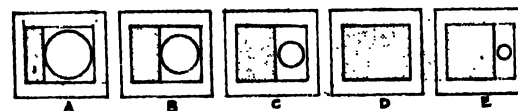


Answer: B & D—In Block A squares are becoming smaller in each figure. In Block B circles are becoming smaller in size in each column. In Block C, squares in columns B and D have the same correlation.

ARRANGING FIGURES IN SEQUENCE

In such questions, a set of five group of figures is given. Each set has figures which have some similarities but there is some difference in their natural sequence. Study the pattern in each block and arrange them in a complete series. See example below:

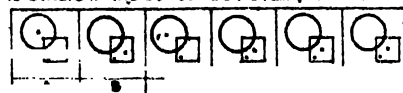
Name the serial number of the two figures in the following questions which are out of place and require interchanging of positions, in order to put the entire series in order.



Answer: Figure D should go in column E and figure E should come to column D; because in the preceding figures the shaded area is increasing in each subsequent figure and the size of the circle is decreasing. The last column should then be completely shaded.

SPOTTING THE ODD ONE OUT

Here, the Problem Figure and Answer Figure are the same. There is generally a battery of six figures marked serially 1 to 5 or A to E. Out of these six figures five are similar in some way and one is dissimilar. You have to cross out the one which is not matching or irrelevant or is different from the others in the series. See example below:

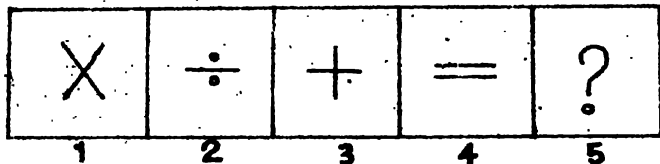


part, from among a number of choices, the candidate selects the correct answer. These tests are meant to evaluate the candidate's ability to discern the logical relationship presented by non-verbal materials. See example below:

Classification

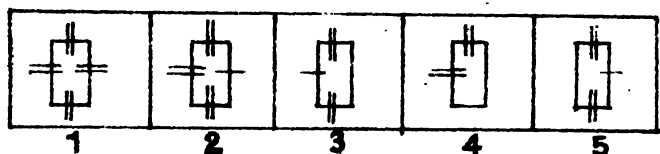
Basically odd-one-out tests can be categorised as under:

Qualitative type: Here the diagrams have qualitative relationship, i.e., they pertain to one particular class and the one which is different in that characteristic is to be spotted out. See example below:



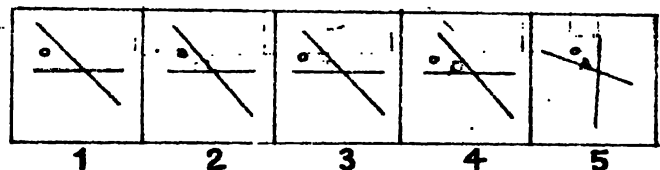
Answer: All the signs represent a mathematical relationship, except for the last figure which is a punctuation.

Quantitative type: In these diagrams the number of elements/items have a certain correlation. One of the figures does not bear that relationship. See example below:



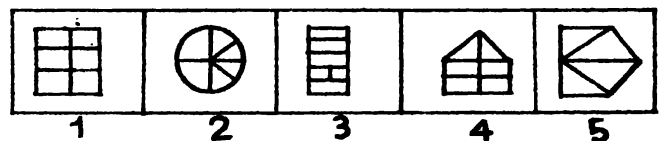
Answer: All the diagrams have a certain number of lines which are decreasing consecutively, except for the last one.

Directional type: Here the direction of figures or their various elements have a certain relationship and one figure which is different from the remaining is to be spotted out. See example below:



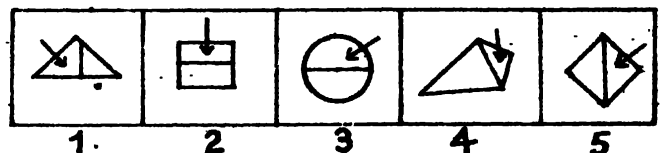
Answer: 5—One line is horizontal whereas in the other diagrams all lines are inclined.

Divisional type: Each figure is divided into smaller divisions. These divisions are in a certain order which is missing in one of the diagrams. See example below:



Answer: 5—It has lesser number of divisions.

Formative type: The diagrams resemble each other in one form or the other. The figure with a difference is to be spotted out. See example below:



Answer: 5—All other diagrams are made of straight lines.

FIGURE COMPLETION

These are based on the Raven Progressive Matrices Tests (1938-56). They were developed in England and used during World War II. They are non-verbal scales developed to judge the candidate's ability to comprehend correlations between geometric figures and diagrams and to

A pattern/figure is given, a portion of which is left incomplete. A few choices in the answer pattern are also given. Select the figure which fits into the blank space in the incomplete figure so that the original pattern is complete.

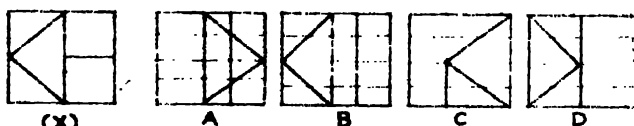


Answer: C.

SPOTTING HIDDEN FIGURES

These non-verbal tests judge the candidate's sense of observation and analytical aptitude. In such questions, the Problem Figure comprises just one figure. The Answer Figure contains four or five different blocks. The Answer Figure has a hidden figure of the Problem Figure, which is to be spotted out. See example below:

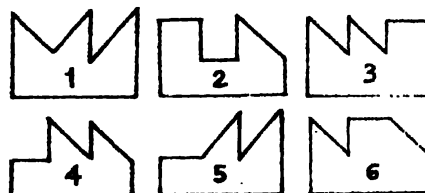
There is a block X which has the basic design. The four blocks that follow, i.e., A, B, C and D have a group of more complex figures. In one of these figure X is hidden.



Answer: B—This figure contains the pattern X.

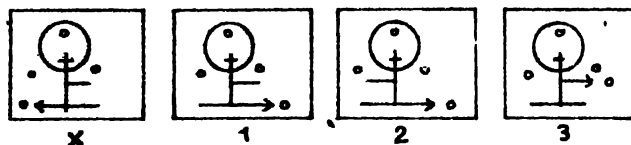
MISCELLANEOUS NON-VERBAL TESTS

Analytical ability: Two of the designs shown below will fit in together to form a perfect square without leaving any gaps. They have to be selected. See example below:



Answer: Figures 4 and 3 will fit in to form a perfect square.

Lateral inversion: One main diagram X is given followed by several choices. The figure which will appear like the question figure X, when seen in a mirror or which represents the lateral inversion of X, has to be spotted. See example below:



Answer: Figure 2 is the lateral inversion of X.

HIGH-SPEED DIAGNOSIS

It will take precisely 15 sec to diagnose a patient's eyesight, thanks to an automatic eye refractometer developed by the associates of the Leningrad Optical Institute. The patient has only to look into its ocular and the data on the state of his eyesight immediately appear on a special display board. And to top it all, the computer attached to the refractometer, if necessary, will also print the prescription for eyeglasses. It will not be long before the familiar tables with letters disappear from eye-doctors' clinics.

VERBAL INTELLIGENCE

In Verbal Intelligence tests extensive use of words (including letters of the Alphabet) and figures (both Arabic and Roman) is made. This calls for knowledge of the language in which these tests are conducted as well as proficiency in scientific, mathematical and technical knowledge. Educational background and academic achievement, coupled with common-sense, play a dominant role in these tests. Most of these tests attempt to combine as many kinds of problems as possible (both language proficiency and mathematical problems). They also include logical and common-sense reasoning tests.

Various types of Verbal Intelligence tests are being used in various competitive exams and an effort has been made to include as many verbal tests here as possible:-

Verbal Analogies

In Verbal Analogies, the relationship between given words/alphabet has to be established and the same has to be extended to other words/alphabet. Verbal analogy questions consist of two parts: (a) the first unit consisting of two words/ alphabet having a certain relationship; and (b) the second unit containing one word/ alphabet followed by question mark(?). The candidate has to choose the most appropriate word/alphabet which shows the same relationship as the first two words/alphabet.

Verbal Analogies may be broadly divided into two parts, viz: Word Analogies, where words having a certain relationship are used like "Plate is to curry, as water is to Tumbler"; and Alphabet Analogies where only letters of the alphabet are used, as "B" is to "D" "E" is to "G"

Word Analogies

The types of relationship established in word analogies are quite a few.

Qualitative relationship: Water : Milk :: Air : Vapour

Cause and effect relationship: Work : Fatigue :: Germ : Disease

Part and whole relationship: Hand : Fingers :: Pen : Nib

Purpose relationship: Net : Fish :: Airgun : Birds

Tool and worker relationship: Hammer : Carpenter :: Screwdriver : Mechanic

Tool and object relationship: Screw-driver : Screw :: Pen : Paper

Class relationship: Reptile : Snake :: Mammal : Cow

Action to object and vice versa: Hit : Ball :: Driving : Car

Place relationship: Taj Mahal : Agra :: India Gate : Delhi

Equipment & purpose relationship: Thermometer : Temperature :: Barometer : Air pressure

Sequential relationship: November : December :: Sunday : Monday

Opposite relationship: Correct : Wrong :: Good : Bad

Product and manufacturer relationship: Table : Carpenter :: Shirt : Tailor

Symbol relationship: Green light : Move :: Red light : Stop

Time relationship: Morning : Evening :: Hour : Minute

Profession/Professional relationship: Surgeon : Advocate :: Teacher : Doctor

Sex relationship: Girl : Woman :: Buffalo : Cow

Associated relationship: Students : Teachers :: Patients : Doctors

Degree relationship: Luke-warm : Warm :: Cold : Freezing

Alphabet Analogies

In these tests only letters of the alphabet are used in various relationships. For example:

Direct alphabetic sequential relationship: AB : CD :: EF : GH

Opposite alphabetic relationship: DC : SR :: XW : BA

Vowel/consonant relationship: IC : BC :: EU : DE

Missing sequence relationship: AB : FG :: KL : PQ

(The following 3 letters are missing and (one intermediate letter is omitted) BD : EG :: KM : SU)

Letter form relationship: I : T :: L : N (letters formed by straight lines)

Jumbled letter relationship: GNIK : KTNG :: ARNEL : LEARN

SERIES COMPLETION

Verbal series completion tests consist of:

(i) Letter series; (ii) Numerical series; and (iii) Letter-numerical mixed series. In these tests a number of letters/numbers (digits) etc., are arranged in a specific sequence. After giving some digits so arranged, a blank space is left in order to:

* Establish the correlation (order/sequence) in the available data.

* Find the suitable answer from the choice based on the order/sequence detected in the given data.

Letter Series

Directions: (i) Alphabet is grouped, e.g., Double letter group: AB, CD, EF, BC, DE, etc. Triple letter group: ABC, EFG, HIJ, KLM, etc. Four-letter group: ABCD, EFGH, HIJK, KLMN, etc.

This can be made both in forward and backward directions, e.g., ABC (forward), CBA (backward).

(ii) Alphabet is serial numbered, e.g., A-1, B-2, C-3, (forward numbering). A-26, B-25, Z-1 (backward numbering).

(iii) There are only five vowels (A, E, I, O, U) and the remaining letters are consonants.

Classification

The Letter Series has its variations.

Simple order series: ABC : DEF :: GHI : MNO

Alternate order series: BDF : ACE : MOO : RTV

Circular sequence: ABC : MNO :: XYZ : ABC (After letter Z in circular sequence A comes next because of the continuing pattern).

Opposite order series: CBA : ONM :: ZYX : MNL (CBA is opposite order of ABC)

Skipping letter series: Skipping of letter from natural sequence is made in a specific order, i.e. three or more letters are omitted in the sequence, e.g., BFJ : CGK :: QUY : JNQ

answers should prove helpful

1. B D F H 2. S V Y B 3. A Z C X B 4. B C H I N 5. A E J P 6. T S Q N

Answer

1. J (skipping of alternate letters in the alphabetical series)
2. E (Every third letter alphabetically, returning to the beginning when Z is reached—circular sequence)
3. Y (alternate letters, forwards from A and backwards from Z in alternating sequence)
4. O and T (two series alternating, every sixth letter from B and C)
5. W (the interval between the letter increased by one each time)
6. J (backwards, the interval increased by one each time)

Number Series:

In these questions numericals are used. The series is made in various ways, e.g., by multiplication, division, addition and subtraction as illustrated in the following examples:

- (1) 7, 9, 13, ———
- (2) 285, 253, 221, 189, ———
- (3) $3\frac{3}{4}$, $2\frac{1}{2}$, 1, $-1/3$ ———
- (4) 905, 576, 329, 245, ———
- (5) 8723, 3872, 2387, ———
- (6) $2\frac{1}{2}$, 6, $15\frac{1}{2}$, 35, $65\frac{1}{2}$, ———
- (7) 381, 378, 373, 366, ———
- (8) -1, 3, 15, 63, ———

Answer:

- (1) 21 (the numbers increase in steps of 2, 4, 8, and 16).
- (2) 157 (the numbers decrease by 32 each time)
- (3) $-1\frac{2}{3}$ (subtract $1\frac{1}{3}$ each time)
- (4) 84 (the interval between each pair of numbers becomes the succeeding terms in the series)
- (5) 7238 (the digits exchange places—based on commonsense reasoning and no calculations required)
- (6) 717 (there are two alternating series. One begins at 56 and is halved each time. The other begins at 87 and is formed by doubling the previous term and adding 3)
- (7) 357 (the series is 382 minus the squares of 1, 2, 3, and 5)
- (8) 225 (the series is 5 raised to the powers of 0, 1, 2, 3, and 4, minus 1)

Letter-number Mixed Series:

These series establish some sort of a relationship between the alphabet and the Arabic numbers. Each letter is allotted numerical value and vice versa following the pattern explained in analogies. See example below:

Fill in the missing numbers.

1	D	9	?
A	4	1	?

B	J	Q	E	?
2	10	17	?	8

A	22	1	12	?
26	E	18	0	?

1. P/1 of the numerical sequence is the square of 1, 2, 3, and 4 and mark the position in the alphabet of the letters A, D, I and P)
2. H and 5 (the numbers in the dominos represent the position in the alphabet of the letters above)
3. U/6 (the vowels go from numerator to denominator. Their position backwards from Z in the alphabet is opposite)

VERBAL CLASSIFICATION

These questions are based on similarity that exists between the objects, words and alphabet. Items are grouped together on the basis of similarity and the one which does not belong to the group or which differs in some respect from the others has to be picked out (odd-one out). In Verbal Classification questions, words as well as letters can be used. Word classification can be based on: (i) Meanings; (ii) Characteristics and (iii) Common prefixes/suffixes or middle letters. In the case of letters classification, there can be questions based on (i) Position of letters in the alphabetical order; (ii) Capital and small letter relationship; (iii) Vowel and consonant relationship; and (iv) Repetition and omission of letters/consonants/vowels etc.

Directions: 1. Carefully observe the possible relationship between words (in their meanings/characteristics/common prefixes/suffixes or middle letters, etc.) and letters (with regard to their position in the alphabetical sequence, capital and small letter relationship or consonant/vowel relationship).

2. Observe if there is any repetition, omissions, etc.

3. Separate (tick) the word or letter combination which is odd or un-related to the remaining ones. See examples below:

Find the odd-one out in the following.

1. (a) Letter (b) Box (c) Book (d) Pot (e) Orange
Answer: (e) All letters end in a consonant but Orange ends in a vowel.

2. (a) London (b) Moga (c) Delhi (d) Bombay (e) Calcutta

Answer: (e) All contain two vowels except (e) which contains 3 vowels.

3. (a) Eye (b) Ear (c) Eat (d) Oats (e) Nose

Answer: (e) All start with vowels except (e) which starts with a consonant.

4. (a) abCD (b) EFgh (c) RStu (d) MNop (e) Ukl
Answer: (a) Starts with two small letters, whereas all others end in two small letters.

5. (a) Dear (b) Fear (c) Peel (d) Poor (e) Date
Answer: All have 2 vowels in the middle, except (e) which has two vowels which are alternating.

6. (a) Holiday (b) Monday (c) Sunday (d) Tuesday (e) Wednesday

Answer: Except (a) all are names of the days of the week.

7. (a) When (b) Who (c) Whom (d) Whose (e) Whosoever

Answer: (a) All refer to a person, except (a) which refers to time.

CODING & DECODING TESTS

Codes are used for conveying secret messages from one place to another, especially in the Defence Services. These codes are based on various principles/patterns and are to be

correct message. These codes can be broadly classified into the following categories:

Letter Coding

Letters of the alphabet are used in the coding method. The letters do not stand for themselves but are allotted an artificial value based on some logical pattern. Questions on letter coding can be of various types.

Analogical letter coding: These codes are based on the analogy of one given example: If 'S P T F A' stands for 'B L A D E', how will you code the word 'B A L E'? No rule is involved. Only analogical relationship exists, i.e. S=B, P=L, T=A, F=D, A=E. Hence 'B A L E' can be coded as 'STPA'.

Coding on specific pattern: Letters are allotted an artificial value but in a specific pattern. If 'MAILED' is coded as 'NBJMFE', how will you code the word 'ACTED'? Here the letters stand for the next in sequence, i.e., A stands for B, B stands for C, D for E and so on. Therefore the answer should be 'BDUFE'.

Coding With Numerical Digits

Here the letters are allotted numerical values and vice versa. This is done in various ways, like:

Analogical coding with numerical digits: This is done by correlating a letter with numerical values; from the given example: If 'L O D E S' is coded as '4 6 3 2 1', how will you code 'D O E S'?

Answer: 3621—Here L=4, O=6, D=3, E=2 and S=1.

Coding with specific pattern: There are several types, e.g.,

- Forward sequence (A=1, B=2, C=3, and so on)
- Backward sequence (Z=1, A=26)
- Random sequence (A=2, B=3, or A=4, B=6, C=8)
- Circular sequence (D=1, E=2, and Z=23 A=23)

Here numbering can start from any letter : See example below:

1. If A C E are coded as 1, 3, 5, how will you code ACTED?

Answer: 1 3 20 5 4

2. If DATE is coded as 23 26 7 22, how will you code ZEAL?

Answer: 1 1 22 26 15

3. If CABLE is coded as 6-4-5-15-8, how will you code 'BACK'?

Answer: 5-4-8-14; here letter A=4 and subsequent pattern follows, i.e. B=5 and C=6 etc).

Adding up of numerical values: Here the values allotted to the alphabet are added up to form a code. The allocation of numerical values are based on the above pattern, i.e., forward/backward/random/circular sequence. For example: If LATE is coded as 58, how will you code Make?

Answer: 30—In late L=12, A=1, T=20, E=5, when added up become 58, therefore when M=13, A=1, K=11 and E=5, when added up will be 30

Mixed Coding:

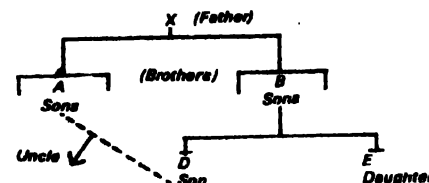
Here letters along with Arabic numerals or Roman numbers are used to form codes. For example: If 'A 3 T 5 D' stand for 'A C T E D' and 'D 1 T 5 D' for 'DATED', how will you code 'FADED'?

Answer: F 1 d 5 d.

If 1 3 9 D is decoded it stands for A C I D.

These tests are based on blood and family relationship. At the outset they seem difficult and quite confusing. However, the best method to attempt them is to quickly draw a diagram depicting each relationship given in the question. For example:

- (a) A is the brother of B
 - (b) C is the sister of A
 - (c) D is the brother of E
 - (d) E is the daughter of B
- Who is the uncle of D?
A—brother of—B (statement a)
E—daughter of—B (statement d)
D—son of—B (statement c)
Hence D is the son of—B and A is the uncle of D.



Symmetrical relationship tests

In these questions either the age, height, sitting position or other symmetrical relationship attributes are to be discovered. For example:

- (a) A is richer than B
- (b) C is richer than A
- (c) D is richer than C
- (d) E is the richest of all

If they are made to sit in the above degree of richness, who will have the medial position?

E is the richest of all. Therefore, he is richer than D. Denote the above relationship by following the diagram and you will get the correct answer:

E > D > C > A > B

The sign > denotes richer than.

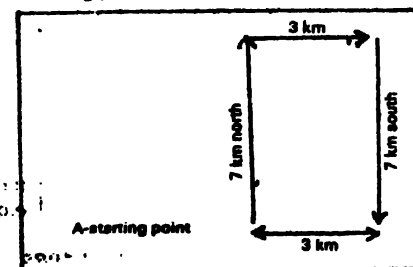
Answer: c

DIRECTION TESTS

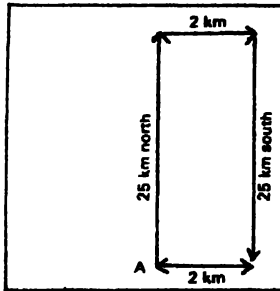
For solving Direction tests, a candidate should have a knowledge of the direction of the analogy of map reading. He has to keep in mind the directions given in the question and the distance covered, and the right hand or left hand turnings.

Several types of questions based on direction reading can be framed as illustrated in the following examples:

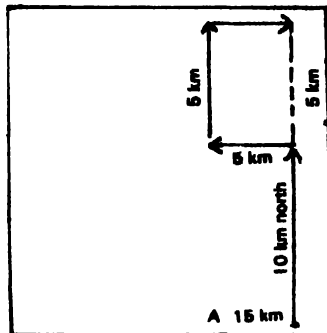
Example 1: Shamtravels 7 km to the north. Then turns to the right and walks 3 km. Then again he turns to his right and moves 7 km forward. How many kilometers away is he from the starting point?



place of stay at A and after travelling 25 km finds that she has driven in the wrong direction. She then turns to her right & travels 2 km and then she again turns to the right and drives straight another 25 km. How much distance has she now to cover to go back to the starting point?

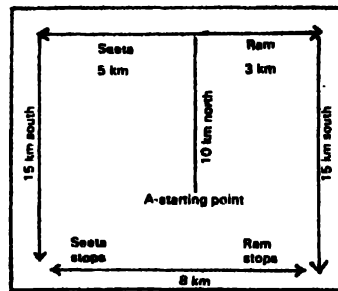


Example 3: Rana travels to the north 10 km, turns left and travels 4 km and then again turns right and covers another 5 km and then turns right and travels another 4 km. How far is he from the right starting point?

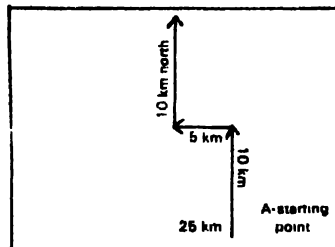


Example 4: Seeta and Ram both start from a point towards north and walk 10 km. Seeta turns to her left and Ram turns to his right. Seeta waits for some time and then walks another 5 km in the same direction in which

3 km. Seeta then turns towards her left and Ram turns towards his right. Both now walk 15 km forward. How far is Seeta from Ram?

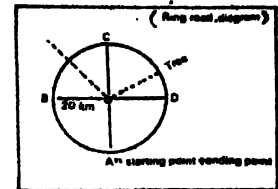


Example 5: A taxi driver commenced his journey from a point and drove 10 km towards north and turned to his left and drove another 5 km. After waiting to meet one of his friends, he turned to his right and continued to drive another 10 km. He has covered a distance of 25 km so far but in which direction would he be now?

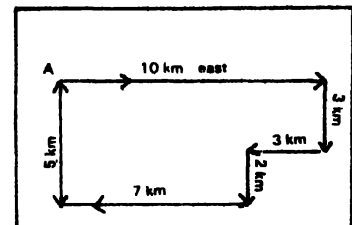


Example 6: There is a ring road connecting points A, B, C and D. The road is in a circular form but having several *kutcha* approach roads leading to the centre of the circle. Exactly in the centre of the ring there is a tree which is 20 km from point A on the circular road. Presuming that one has gone round the circular road starting from point A and finishing at the same point after touching points B, C and D, if the person drives 20 km interior towards the tree, from

between B & C on the ring road, how much distance would he have to travel from the tree to reach the point between B & C on the ring road?



Example 7: A tourist drives 10 km towards east and turns to the righthand side and takes a drive of another 3 km. Then he drives towards west (turning to his right) another 2 km. Afterwards, he turns to his right and travels 7 km. How far is he from his starting point and in which direction would he be?



Answer choice

Example 1: (a) 7 km (b) 3 km (c) 6 km (d) 14 km

Example 2: (a) 25 km (b) 2 km (c) 4 km (d) 50 km

Example 3: (a) 15 km (b) 4 km (c) 5 km (d) 10 km

Example 4: (a) 15 km (b) 10 km (c) 8 km (d) 12 km

Example 5: (a) North (b) East (c) West (d) South

Example 6: (a) 20 km (b) 15 km (c) 80 km (d) 40 km

Example 7: (a) 10 km, east (b) 9 km, north (c) 8 km, west (d) 5 km west.

LOGICAL REASONING TESTS

The mental recognition of cause-and-effect relationship is called reasoning. It may be the prediction of an event from an observed cause or the inference of a cause from an observed event. Logical reasoning is a process of passing from the known to the unknown. It is the process of deriving a logical inference from a hypothesis through reasoning. This type of reasoning involves three important attributes, viz. What? Why? and How? Another important factor in logical reasoning is logical deduction. Deriving an inference from units of arguments which are called proposition in logic or deducing an inference from statements, is called logical deduction. For example:

(a) Man is mortal

(b) Ram is a man

Therefore, Ram is mortal

From statements (a) and (b) we derive a logical conclusion that Ram is mortal.

BASIC CONCEPTS IN LOGIC

Term means the *subject* or *predicate* of a

logical proposition. A *proposition* is the statement of a certain relation between two terms. All propositions either assert or deny something. The subject is that about which an assertion is made and whatever is asserted is called the predicate. The sign of relation between subject and predicate is called *copula*. For example:

"Man is mortal" is a proposition, the term Man is a subject and Mortal is predicate and both terms are joined by copula "is".

Proposition may be classified as follows:

(a) **Universal:** what is asserted applies to whole of the subject. Usually "ALL" is prefixed to such propositions. "All religious men are good" is a universal proposition.

(b) **Particular:** only part of the subject is covered. Usually "Some" is prefixed in a such propositions. "Some steaks are tough" is a particular proposition.

Universal & Particular propositions are based on quantity. They are further classified on the basis of *quality*, viz. **Affirmative** (e.g., Ram is an Indian) and **Negative** (Ram is not Indian).

Based on quality and quantity, propositions are further classified into:

(a) **Universal affirmative:** "All testotals are short-lived" affirms something of the whole subject. This is represented by "A".

(b) **Universal negative:** "No politician is rancorous". Something is denied of the whole subject. This is represented by "E".

(c) **Particular affirmative:** "Some professors are hard-working". Something is affirmed of a part of the subject. This is represented by "I".

(d) **Particular negative:** "Something is denied of a part of the subject. "Some writers are professionals". This is represented by "O". Symbols A, E, I and O, above are adapted from first two vowels of "Affirmo" and "Nego". A & I are therefore affirmative and E & O are negative.

Distribution of terms

● A term is distributed when reference is made to all. A term is undistributed when reference is made to an indefinite part of the whole.

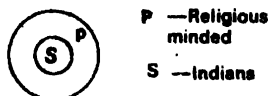
In a proposition where the subject is undistributed, the subject is undistributed.

● The predicate in A proposition is undistributed and the same is true for I proposition. Hence affirmative propositions do not distribute their proposition.

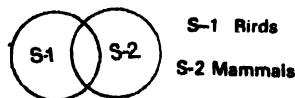
● In E proposition the predicate is distributed and this also applies to O proposition.

The universal proposition distributes the subject, while particular proposition does not distribute the subject. On the other hand, the predicate is distributed in negative propositions but undistributed in affirmative ones. This can be diagrammatically described as follows:

A Proposition: "All Indians are religious-minded."



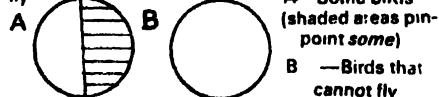
E proposition: "No birds are mammals". The classes are mutually exclusive.



I proposition: "Some birds are web-footed". Two classes are partially included in one another.



O proposition: "Some birds are not able to fly".



The shaded part of Circle (A) represents "Some birds". The circle (B) refers to all those who are not able to fly. The subject "Some" is undistributable but circle represents substances that are unable to fly; it means it covers All. So in O proposition predicate is distributed but not the subject.

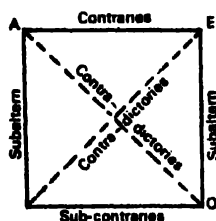
Logical Relationship

The relation between propositions which are logically relevant, are those in which the possible truth or falsity of one or more proposition limits the possible truth or falsity of others. For instance:

- Art cannot be taught
- If art is not knowledge, then art cannot be taught
- If art is knowledge, then it can be taught
- Art can be taught
- Art is knowledge
- Art is not knowledge

In (a) and (d) both cannot be true, since one affirms what the other denies and both cannot be false for the same reason. Same relation applies between (e) and (f). Such propositions are contradictory. In (b) and (c) there is no contradiction because art can be taught under certain contingencies. There is no mutual limitation upon the possible truth/falsity of these two propositions. They are called independent. (a) and (f) asserted jointly form a conjunctive proposition and ask for the relation with (e). This is, if both (b) and (f) are true, (e)

propositions so related that if the first is true, the second is also true; but if the second is true, the first is *undetermined* or *not thereby limited* in its truth value are said to be in the relation of superaltern to subaltern is also called superimplication. The truth-value of a proposition in logic means either truth or falsity. For example: If p is true, q is true (here p symbolises any proposition and q any other). If p is false q is undetermined. If p is true, q is undetermined, if p is false, q is false.



Contradictories of two propositions both cannot be true, but one of them must be true. **Contraries** are extreme opposites, and do not between them exhaust all possibilities. They cannot both be true but they may both be false. **Sub-contraries** are precisely reverse of each other.

Logical Inference

Inference is a mental process of arriving at a conclusion from more than one proposition. Inferences are of two types. They are **deductive**, when we move from the general to the particular and **inductive** where the conclusion is wider in extent than the premises. In intelligence testing mostly deductive inference ability is judged. Deductive inference may be further classified as (1) Immediate Inference and (2) Mediate Inference

Immediate Inference

Here the conclusion is derived from a single-premise. It is a process of directly coming to a conclusion from one premise. For example: Statement: Some students are not bright. Conclusion: Some bright persons are not students.

Statement: Industrial workers are paid well.

Conclusion: Some well paid persons are industrial workers.

Questions on immediate inference can be set in two ways:

- A correct statement is given and then it is asked whether the inference can be derived from that or not.
- An incorrect statement (false) is given and then it is asked whether the inferences are correct or not.

The results obtainable by immediate inference process are termed Conversion; Obversion; Contraposition; and Inversion.

Conversion

From a given proposition we infer another proposition by interchanging or transposing the subject and predicate thereby:

- Subject and predicate interchange their places
- Quality does not change;
- Quantity (the denotation of the term) also does not change; and
- The converse of A is I, of E is E, I is I but O cannot be converted. For example:

Therefore, some virtuous people are men.

- (I) (Valid)
2. No man is virtuous (E)
Therefore, no virtuous being is a man (E) (Valid)
3. Some men are intelligent.
Therefore, some intelligent beings are men (I) (Valid)

But proposition O cannot be converted as it will become an invalid inference. For example:

4. Some men are not wise (O)
Some who are wise are not men. (Invalid).

Obversion

Conclusion is drawn by interchanging the quality without changing its meaning. Thereby:

- The subject of the given premise remains the subject in conclusion.
- The predicate of the conclusion will be contradictory to the given proposition by adding the word 'non'.
- Quantity does not change; and
- Quality changes: affirmative to negative, and vice versa. For example:

1. All men are free (A)
Therefore, no man is not free (E) Valid
2. No man is perfect (E)
Therefore, all men are non-perfect (A) Valid
3. Some businessmen are rich (I)
Therefore, some businessmen are not rich (O) Valid
4. Some men are not good (O)
Therefore, some men are not good (I)

Contraposition

Here a double change takes place. First the change is to obverse and then to converse. For example:

- All men are mortal (A)
- No non-mortal is man (E). Therefore no man is non-mortal (E)

Inversion

There are two types of inversions: Partial; in which the subject is contradictory of the original and the predicate same as the original. The inverse of; All physicists are mathematicians is either "some non-physicists are non-mathematicians", or "some non-mathematicians are non-physicists". The former is partial and the latter is full inversion.

Only universal propositions A and E can be inverted. The inverse of A and E is always a particular proposition I or O.

Here are some examples of Immediate Inferences

1. Statement: Industrial workers are hard-working.
Conclusion: Some hard-working persons are industrial workers.
Conclusion is True because converse of A is I.
2. Statement: Lady doctors are not less paid than male doctors.
Conclusion: Some male doctors are less paid than lady doctors.
3. Statement: No man is perfect.
Conclusion: Some imperfect persons are men.
Conclusion is True, contraposition of E, first obvert then convert:
4. Statement: All men are mortal.
Conclusion: No man is non-mortal.
Valid because obverse of A is E.
5. Statement: Some men are wise.
Conclusion: Some men are not unwise.
Conclusion is valid as obversion of I is O.

MEDIATE INFERENCE (Syllogism)

Here two premises are given on the basis of which the inference has to be drawn. For example:

1. All men are mortal.
 2. All teachers are men.
- Therefore, all teachers are mortal.

1. All men are good.
 2. Ram is a man.
- Therefore, Ram is good.

Syllogism may be further classified as follows:

Categorical: The given propositions or the premises are categorical. The conclusion is also categorical. For example:
All men are strong.
He is a man.

Therefore, he is strong.

Hypothetical-categorical: The major premise is hypothetical (conditional assertion) and minor premise is categorical. Inference (conclusion) remains categorical. For example:
If you come in time, you will meet him.
You came in time.

Therefore, you met him.

Disjunctive-categorical: The major premise is disjunctive (conditional proposition) and the minor premise is categorical. Inference also remains categorical. For example:
Either he is intelligent or you are teaching him.
He is intelligent.

You are teaching him.

Dilemma: The major premise is a compound hypothetical, the minor premise is disjunctive and the conclusion is either categorical or disjunctive. For example:

1. If A is B, C is D, and E is F, C is D.
2. Either A is B or E is F.
3. C is D.

Fallacies

In logical reasoning questions validity of the conclusion is to be determined. Fallacies are misleading arguments (sophism) and their validity, depends on certain rules and their violation amounts to committing a fallacy. There are various kinds of fallacies:

Syllogistic Fallacies

Undistributed middle: Study the following example:

All fruits are good for health.
Iron tonic is good for health.

Therefore iron tonic is a fruit.

The middle term "good for health" is undistributed and, therefore, the conclusion is fallacious.

Illicit process: When the term undistributed in its own premise is distributed in the conclusion, an illicit fallacy occurs.

Some intelligent persons are liars } Of major
Ram is a liar } premise.
Therefore, Ram is intelligent. }

Fallacy of two middle terms: Study the following examples:

Nothing is better than wisdom.

A loaf of bread is better than nothing.

Therefore, a loaf of bread is better than wisdom. In this example there are four terms: "Nothing", "better than nothing", "Wisdom" and "a loaf of bread".

Fallacies of Diction: Here the use of ambiguous words in statements amounts to a

fallacy. For example:

Apples are good.

Good is the aim of man's life.

Therefore, the aim of man's life are apples.

Use of ambiguous phrases also leads to fallacies, or when the construction of the sentence is misleading. These fallacies are called 'fallacy of amphibology'. For example:
Gavaskar, Bedi will lead.

In this it is not clear as to who will lead-whether Gavaskar or Bedi.

Fallacies of composition and division: An argument becomes erroneous in composition when what is true of certain things, each taken separately, is assumed to be true of them collectively in the conclusion. For example:

Three and two are odd and even. Three and two are five. Hence, five is odd and even. An argument becomes erroneous in division when what is true of certain things collectively is taken to be true of them separately in the conclusion. For example:

Red Indians are disappearing.

He is a Red Indian.

Hence, he is disappearing.

In addition, there are fallacies relating to wrong accent, 'false causes' and arguing beside the point which can be easily made out from the given statement.

Relational Arguments

The properties of relation involved in a piece of argument also govern the validity of the conclusion. These relations are classified as follows:

Symmetrical: Where if the premise is correct, the conclusion is also correct.

Asymmetrical: Where if the premise is right, the conclusion is false.

Non-symmetrical: Where if the premise is true, the conclusion may or may not be true.

Transitive: Where relation travels from A to C via B or X to Z via Y.

Intransitive: Where relations do not travel from X to Z via Y.

Non-transitive relations: Where a relation may or may not travel through a media.

Reflexive: When the relation holds between a term and itself.

Irreflexive: When it cannot hold between a term and itself.

Non-reflexive: These may or may not hold between a term and itself.

The following examples are illustrative of relational arguments

1. A is equal to B
∴ B is equal to A (symmetrical-hence valid)

2. A is greater than B
∴ B is greater than A (Asymmetrical-hence invalid)

3. A is brother of B
∴ B is brother of A (non-symmetrical-not or may not be-hence may or may not be valid)

4. A is equal to H
B is equal to C
∴ A is equal to C (Transitive-hence valid)

5. A is father of B
B is father of C
∴ A is father of C (Intransitive-hence invalid)

Example 1:

B is good to C

A is good to C

(Non-transitive-hence invalid-may or may not be good.)

7. Sham is as tall as

Ram

Ram is as tall as

Rajan

∴ Sham is as tall as (Valid-possess reflex-iveness, symmetrical and transitivity)

Forcefulness of Arguments

In such questions, a problem is posed in an interrogative sentence followed by two arguments, one of which begins with Yes and the other No. To arrive at a correct answer, the following points are to be borne in mind.

- (a) The argument should be factual-based on facts and not an assumption.
- (b) The argument should be specific and not generalised.
- (c) The argument should be in conformity with the prevailing ideas and truth and should support the current thinking of the majority.
- (d) There should not be any kind of ambiguity in the arguments.

The question below, an example of question format is followed by two arguments I and II. You have to decide which of the two arguments is strong and which is weak and mark the answer choice based on the following:

- (a) Only I is strong;
- (b) Only II is strong;
- (c) Both I and II are strong;
- (d) Either I or II is strong;
- (e) Neither I nor II is strong.

Statement: Computerisation in offices is a must to provide efficient services to the citizen.

Arguments: (i) Yes, because the work is done quickly and time is not wasted.

(ii) No, it will generate more unemployment.

Answer: (a) the Argument I is quite strong to support computerisation in offices.

LOGICAL REASONING vs COMMON SENSE REASONING

In logical reasoning you have to base the validity or falsity of the conclusion on the given premises. You are not concerned with the truth or falsity of the given premises. You have to presume they are correct, which in fact they may not be.

For example:

Statement:

Some men are cars. Ram is a man

Conclusion I: Some cars are men

Conclusion II: Some men are not cars.

From the above statements, we conclude that some men are cars because some cars are men and some men may not be cars. Actually, no man can be a car and no car can be a man. However, from logical deduction this can be concluded though actually it is wrong.

In common-sense reasoning, no doubt logical rules are helpful but you cannot arrive at a 100% correct answer. In such questions the answer choice is more than two, i.e., (a) True (b) Probably True and (c) Probably False or Irrelevant. Here first you have to ascertain

... true, for reason that it is nearer to 100 than to zero. If it is less than 50%, then it is probably false because in that case it is nearer to zero. If it is zero, then it is absolutely false and if it is 100% true, then it is absolutely true. For instance:

Statement: All students of this class secured 1st division.

Roshan is a student of this class.

Roshan secured first division.

Answer : True: "All" includes Roshan and thus 100% true.

DIRECTIONS:

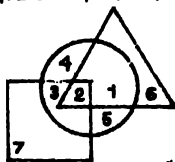
- When there is greater probability of being true, the answer should be marked probably true. In such cases following words/phrases support the decision:
Almost all, Nearly all, Mostly, Generally, Many, Normally, To a large extent, etc.
- When there is greater probability of being false, the answer should be marked probably false. In such cases following words/phrases support the decision:
Rarely, Nearly none, Almost never, Hardly, Only a few, Very few, Very little, Once in a while, etc.
- When there is no probability of being false, the answer should be marked true. Here generally qualifying words/phrases as follows help to decide:
All, Always, Whole, Everyone, Everybody, Each.
- When there is no probability of being True the answer should be marked false. In such cases following qualifying words support the conclusion:
None, Not at all, Never, Not even one, Not even once.

REASONING LOGICAL DIAGRAMS

In such questions, candidates are expected to establish a relationship among three or more items represented by diagrams. This requires a logical understanding and careful observation of the diagrams. The items represented by the diagrams may be individuals, groups, class/category of individuals, cities-district-state relationship or some other phenomenon. Generally two types of logical diagrams reasoning tests are used.

- Single diagrammatic relationship:** Here a diagram is given of which a few parts are numbered. The candidate is asked to point out which number represents a particular statement. For example: This diagram represents 3 segments of society overlapping each other, viz:

Circle=Educated youth Triangle=Unemployed youth, and Square=Employed youth.



Based on the above relationships given in the diagram, you have to point out which represents the following statements.

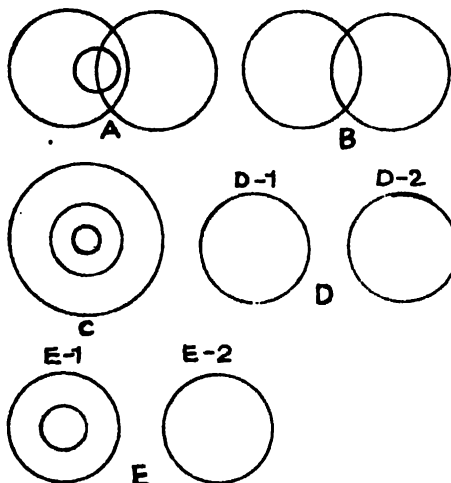
- Some educated youths are employed.
(1) (2) (3) (4) (5) (6) (7)

- Some educated youths are not employed.
(1) (2) (3) (4) (5) (6) (7)
- Some employed youths are not educated.
(1) (2) (3) (4) (5) (6) (7).

Answers

- 3 Figure 3 is both in circle and square, which shows educated youth and employed youth, respectively.
- 6 -Figure 1 is only in triangle which represents unemployed youth.
- 1 -Figure 1 is in part of the circle as well as in the triangle which means educated employed youth are included in that part of the diagram.
- 7 -Figure 7 is only in the square which shows employed youth who are not educated as the part of diagram is overlapping, the circle which represents educated youth.

Multi-diagrammatic relationship: In such questions, there are several diagrams (triangles/circles/squares etc) which represent different relationships. The candidate has to pinpoint a portion in the diagram that represents the particular statement. See example below:



Based on the above diagrams one has to find out which of the diagrams represent the relationship given in the following statements:

- Ludhiana, Punjab, North India
(A) (B) (C) (D) (E)
- Criminals, Police, Force
(A) (B) (C) (D)
- Educated People Employed People
(A) (B) (C) (D) (E)

ERRATA

In *History: Down the Ages* (Mar '85), the victor in the First Battle of Tarain was Prithviraj Chauhan and not Muhammad Ghori as published (*The Victor And The Vanquished*).

Amir Khusrau belonged to the medieval period of Indian history, having been born during the rule of Sultan Balban and having died during the rule of Sultan Muhammad-bin-Tughlaq, and not to the Mughal period, as published (*History Makers*).

The errors are regretted. —Editor

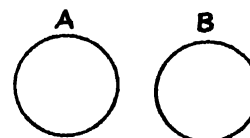
2. Rural Population, Agricultural Labourers, Businessmen

- (A) (B) (C) (D) (E)

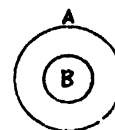
Answers

- (C) Ludhiana is in Punjab and Punjab is in India i.e. Ludhiana = smaller circle, contained in little larger circle = Punjab which is contained in a bigger circle = India.
- (D) Criminals and Police Force are two different segments.
- (B) Some educated people are both employed and unemployed.
- (E) Man is a mammal and as such represented by the diagram E-1 and the crow is a bird, a separate category in the animal kingdom and as such represented by a separate circle.
- (A) Rural population can be businessmen as well as labourers.

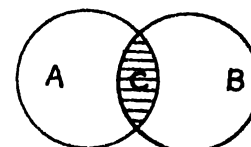
Directions: To solve such questions generally the following relationship between various diagrams should be borne in mind:



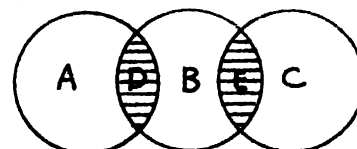
- Represent 2 different items of population having no relationship with each other.



- Represent that one class/category of population is completely contained in the other.



- Represent that neither class/category is contained fully in each other but have members in common



- Represent that there are 3 groups/segments. None of them is fully contained within the other but they have members in common.



- Represent that two groups are completely contained in a bigger class of the population

These relationships can be further extended to include several other relations as well.

Quantitative Aptitude

This forms a part of Verbal Reasoning which requires the ability to reason with numbers, diagrams with numbers, and to deal with quantitative materials and ideas using commonsense as well as quick calculation techniques. In other words, you have to deal with figures for which you should have basic knowledge concerning quick calculations, geometry, Algebra and technique of interpreting data given in graphs, diagrams and tables.

This section involves:

- Questions of percentages, profit and loss, simple and compound interest, speeds, etc;
- Problems concerning geometry;
- Logical data interpretation;
- Interpretation of data given in the form of graphs, diagrams, tables, etc; and
- Common-sense application, to solve general mathematical problems.

QUICK CALCULATION TECHNIQUES

For making quick calculations the following broad principles may be followed:

Vulgar and decimal fractions: For simplifying the fractions, remember the word 'BODMAS' where B, O, D, M, A and S stand for brackets of division, multiplication, addition and subtraction respectively.

Percentages: Method of expressing fractions or parts of an object. Hence 100% = 100 hundredths or 1 and 50% would be 50 hundredths or $\frac{1}{2}$. A decimal is converted to a percentage by moving the decimal point two places to the right. For example: 0.128 = 12.8%. To convert a percentage into a decimal, the decimal is moved two point places to the left. For example: 12.8 = 0.128. The following Table 1 should prove helpful.

Table 1

1% = 1/100	60% = 3/5
2% = 1/50	75% = 3/4
4% = 1/25	80% = 4/5
5% = 1/20	100% = 1
10% = 1/10	120% = 6/5
20% = 1/5	150% = 3/2
40% = 2/5	200% = 2
50% = 1/2	500% = 5

See examples below:

- The population of a state in a given year was 10,000. In one decade it increased by 15%. What is the increased population after the decade?
Answer: 15% = 115% increase. 115% of 10,000 = 11,500.
- What is 20% of 6,835 or 25% of 6,835?
Answer: Just divide the figure of 5 to get 20% and by 4 to get 25%, because:
a) 20 = $\frac{1}{5} \times 6835 = 5 + 6835 = 1367$
b) 25 = $\frac{1}{4} \times 6835 = 4 + 6835 = 1708.7$ or 1709

Interest calculation

Interest = Amount \times Time \times Rate ($I = A \times T \times R$)

- Always assume rate of interest is annual rate of interest, unless otherwise men-

tioned in the problem.

- Assume simple rate of interest, if not specifically mentioned in the problem, as compound interest. See examples below:

At 6% rate of interest, calculate interest for 9 months on Rs 10,000?

9 months = $\frac{3}{4}$ of a year and 6% = $\frac{3}{50}$.

Hence $10,000 \times \frac{3}{4} \times \frac{3}{50} = \text{Rs } 450$.

Rs 5,000 increased to Rs 5,450 in 3 years.

Calculate the rate of interest.

Rs 450 added in 3 years, i.e. Rs 150 added annually. Hence: $150/5000 = 0.03$ or 3%.

If a certain sum of money doubles itself in 3 years at a certain simple rate of interest, in how many years will it become seven times at the same rate of interest? $3 \times (7-1) = 18$ years

Formula: No of years required for doubling the sum

\times
No. of times to be accumulated-1

These are examples of simple interest calculations. In compound interest calculations the interest is periodically added to the amount which is earning the interest. See examples below:

Calculate compound interest for 3 years on Rs 1,000 at 5% rate of interest per annum?

- Rs 1,000 @ 5% = Rs 1,050 (1st year)

- Rs 1,050 @ 5% = Rs 1,052.50 (2nd year)

- Rs 1,052.50 @ 5% = Rs. 1,157.63 (3rd year)

Answer: Total interest = Rs 57.63

Formula: Principal amount (P) \times interest rate (Ir) = Interest (I)

For 1st year: $P \times Ir/100 = I_1$

$(P + I_1) \times Ir/100 = I_2$

$P + I_1 + I_2 \times Ir/100 = I_3$

Compound interest = $I_1 + I_2 + I_3$

Profit & Loss calculation

Formulae: PP = Purchase Price, SP = Selling Price

(1) $PP = \frac{SP}{(100 - \text{loss}\%)} \times 100$

(2) $SP = \frac{PP \times (1 + \% \text{Profit})}{100}$

See examples below:

If Shyam incurred a loss of 15% by selling his goods for Rs 850, at what price should he sell it to get a profit of 70%?

$$PP = \frac{850}{(100 - 15\%)} \times 100 = \frac{850}{85} \times 100 = 1000$$

$$SF = 1000 \times (1 + \frac{70}{100})$$

Answer: 1700

$PP \times 100$

Formula: $SP = \frac{PP \times 100}{100 - (P\% \text{ stands for Profit \%})}$

Kishan buys an article for Rs 40 and sells it at a profit of 20% of the selling price. What is the selling price?

$$40 \times 100 = \frac{40 \times 100}{100 - 20} \times 50$$

Answer: 50

Formula: $SP = PP \times (1 + \frac{P\%}{100})$

You purchased a book for Rs 10 and sold it at a 5% profit. What was the selling price?

$$SP = 10 (1 + \frac{5}{100}) = 10.5$$

Discount calculations

See examples below:

What is the discount if a refrigerator which cost Rs 3,000 is discounted 7% on its price?

7% = 0.07 and discount = Cost (3,000) \times rate of discount (0.07)

Answer: Rs 210

Formula: Discount = Cost \times Rate of discount

If you sell an article for Rs 4,800 the price of which is Rs 5,000, what is the rate of discount?

$$\frac{5,000 - 4,800}{5,000} = \frac{200}{5,000} = \frac{1}{25} = 0.04 = 4\%$$

Answer: 4%

Formula: Rate of discount = $\frac{\text{Cost-price}}{\text{Cost}}$

Areas

1. Rectangle

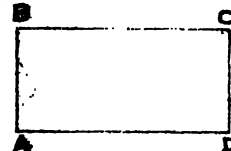
Area = Length \times Breadth

Length = Area divided by breadth

Breadth = Area divided by length

Perimeter = 2 (Length + Breadth)

If AB = 5 ft and AD = 8 ft then area ABCD is 40 sq. ft.



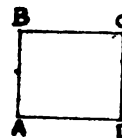
2. Square

Area = side squared or side \times side

Perimeter = side \times 4

Side = Area

If AD = 5 inches, the area of ABCD is 25 sq inches.



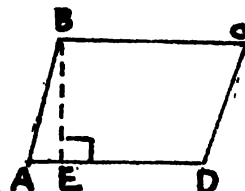
3. 4-walled room

Area of 4 walls = 2 (Length + Breadth) \times height.

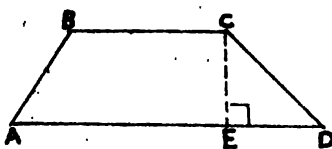
4. Parallelogram

Area = base \times height

If AD = 6 inches and BE = 4 inches, then the area of parallelogram ABCD is 6' \times 4' or 24 sq. inches



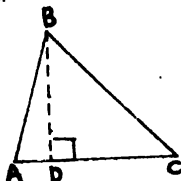
Area = Avg. of the base \times height
 If $AD = 3$ yards, $AD = 7$ yards and $CE = 2$ yards, then the area of trapezoid ABCD is $(3 + 7) / 2 \times 2 = 10$ sq yards



Triangle

Area = $\frac{1}{2}$ (base \times height)

If $AC = 5$ inches and $BD = 4$ inches, then area of the triangle is $\frac{1}{2} \times 5 \times 4 = 10$ sq. inches.



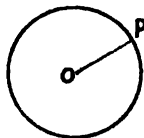
Circle

Area = πr^2

Where r is the length of a radius

Since $d = 2r$ where d is the length of a diameter. $A = \pi (d/2)^2 = \pi d^2/4$. π is a number which is approximately $22/7$ or 3.14 .

If $OP = 2$ inches, then the area of the circle with centre O is $\pi 2^2$ or 4π sq. inches.



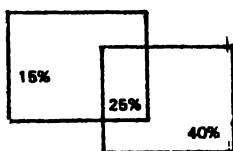
LOGICAL INTERPRETATION OF DATA

Such questions require comprehension ability and quick calculation skill. Generally, the ability to make quick calculations concerning percentages is very essential. See examples below:

65% of the population surveyed read english newspapers, 40% of the population surveyed read Hindi newspapers, 25% read both Hindi and English newspapers. What percentage of the people surveyed read neither english nor Hindi newspapers?

(a) 75% (b) 80% (c) 15% (d) 0

Solution: Note the following diagram:



= 80% people read Hindi and English newspapers
 = 20% read neither Hindi nor English newspapers

As 25% of the people surveyed read both Hindi and English newspapers and 40% read only Hindi newspapers, $40 - 25 = 15\%$ are the people who read Hindi papers but not English

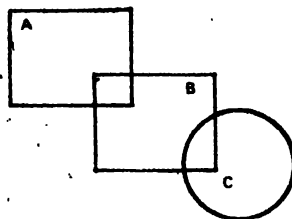
Who read English and Hindi newspapers.
 Therefore, $100 - 80 = 20\%$ are those who do not read any newspaper.

Study the following diagram in which:

A = Youth club members

B = Women club members

C = Family (couples) club members



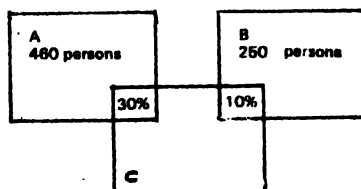
If Club A has 100 members and Club C has 200 members, and 25% members of Club A and 50% members of Club C, are members of Club B; as well, what is the total membership of Club B?

(a) 125 (b) 75

(c) < 125 (d) > 125

Solution: The space which is not overlapped by square A and circle C shows that there are some members who are not included in A and C. Hence the membership of B should be above 125. Therefore, the correct answer choice is (c).

In the following diagram, squares A, B and C represent three different groups. Group A and B have no direct correlation. They are related to group C as it has common members belonging to both groups A and B as is seen by overlapping of the diagram. If total members of group A = 460 and group B = 250 and 30% of the members of group C are also members of group A and 10% of the members of group C are also members of group B, what is the total membership of group C?



Solution: 10% of 250 = 25 and 30% of 460 = 138 which add up as $25 + 138 = 163$. 163 represents 40% of members of group C, the 60% should represent 228 and $60\% + 40\% = 100\%$, means $163 + 228 = 408$ total members of group C.

MATHEMATICAL-SYMBOL RELATIONSHIP

These tests require knowledge of elementary mathematics as well as skill of logical correlation of symbols. See examples below:

1. Some relationship has been expressed through mathematical signs as follows:

\times = multiplication

\div = Division

$+$ = Addition (Plus)

MINUS (-)

Based on the above relationship or symbols, the following questions may be solved.

(a) $(15 = 4) + (3 + 6) - ?$

(a) 90 (b) 99 (c) 0.99 (d) 45

(b) $1/64 = 1/16 - ?$

(a) $2/64$ (b) $3/64$ (c) $3/80$ (d) $3/48$

(c) $\frac{3}{4} \times (\frac{1}{2} + \frac{4}{5}) - ?$

(a) $8/16$ (b) $9/16$ (c) $4/16$ (d) None of these

(d) $2/7 \times 6/7$ of $1/3 - ?$

(a) $1/2$ (b) $1/4$ (c) $3/4$ (d) $2/4$

(e) $|(16 + 2)| + |(2 + 2)| = 3 - ?$

(a) 20 (b) 30 (c) 35 (d) 15

2. Based on the following symbolic relationship, the questions that follow may be answered.

$+$ = equal to

\neq = not greater than

\times = less than

ϕ = not less than

$<$ = greater than

$=$ = plus

Δ = not equal to

0 = Minus

$-$ = Plus

$\#$ = not less than

(a) $(a - b) (a = b)$

Answer: $a^2 0 b^2$

(b) If $a \times b \times c$, it implies

Answer: $a + b \Delta c$

(c) If $a < b \neq c$, it follows

Answer: $b 0 a + c$

(d) If $a < b < c$, it does imply that:

Answer: $a + b \times c$

(e) If $x + y < z$, it implies that

Answer: $x + y \Delta z$

(f) $5 - 502 + 602 + 803 + ?$

Answer: t

FLYING LIGHT

The new aluminium-lithium alloys produced by British Alcan Aluminium (BA) will soon allow aircraft a 10 to 20% reduction in weight. Lithium, which is the lightest of all metals and very common, oxidises rapidly in the air and melts at a fairly low temperature. Once alloyed with aluminium however, lithium metal is stable and non-reactive. The advantages for the aircraft manufacturing industry are clear. There is substantial weight saving compared with other alloys, and its corrosion resistance is proving superior to that of the conventional alternatives.

Work on the new aluminium-lithium alloys started in the mid-1970s, when Britain's Royal Aircraft Establishment researched and discovered a novel advanced alloy of aluminium, lithium, copper and magnesium.

The cost of the new alloys is higher, but BA insists the effect is marginal. An aircraft builder who uses these materials does not incur the expense of acquiring new machines or training operators in different methods. The materials can be worked with existing equipment using conventional techniques. This contrasts with the alternative, reinforced plastics composites, which need investment in all these aspects.

The new alloys' stress fracture toughness, fatigue behaviour and resistance to fatigue crack propagation are all a considerable improvement on current materials. In the constant search for making the aircraft lighter, the new alloys are definitely a milestone.

Practice Tests

In these tests, we have tried to visualise the questions you are likely to face in your actual exam. Great care has been taken to ensure that the questions which are of the same standard as those you'll face in your exam.

Rating: Evaluate your performance on the basis of the following:

100 questions in 60 minutes—Good
60 questions in 60 minutes—Fair
50 questions in 60 minutes—Fair
35 questions in 60 minutes—Fair

Tips: 1. Do not waste time over questions you are not sure about. 2. Give the problem some thought before choosing the answers. 3. Read the directions carefully before answering the questions. 4. Do not try to guess the answer.

MENTAL ABILITY

FOR CIVIL SERVICES, GIC, ASSTS' GDE, POs, CAT...

Now that you have become familiar with intelligence testing and the various reasoning tests involved, attempt these practice tests (meant for Civil Services Prelims, Assistants' Grade, AAO Exam of the GIC, POs, CAT and other management entrance exams) to assess your performance and further eliminate any weak spots that come to light.

Time: 45 minutes

Scores: 1. Give yourself one mark for each correct answer. 2. Deduct one mark for each wrong answer. 3. Then rate yourself as follows:

Excellent.. 93-98 Very Good 87-92 Good. 81-86 Fair 75-80 Poor .. Below 75

DIRECTIONS For each of the following questions tick mark the choice that best answers the question. Answers are given at the end of these tests

VERBAL TESTS

I **Directions** In questions 1 to 6 there is a group of five letters in each. Mark the one which is different or odd.

- | | |
|------------|------------|
| 1 (a) step | (b) stop |
| (c) stay | (d) blast |
| (e) steep | |
| 2 (a) book | (b) pencil |
| (c) copy | (d) ink |
| (e) blade | |
| 3 (a) bale | (b) fade |
| (c) load | (d) take |
| (e) rake | |
| 4 (a) loop | (b) fool |
| (c) peel | (d) deal |
| (e) kill | |
| 5 (a) fear | (b) dear |
| (c) deer | (d) fork |
| (e) plot | |
| 6 (a) take | (b) takes |
| (c) table | (d) taking |
| (e) took | |

II **Directions** In questions 7 to 12, some letters are set in a specific order. Study the series carefully and fill in the blanks from the choices given under each question.

- 7 A D E H I L M —
(a) N (b) O
(c) P (d) Q
- 8 M P S V —
(a) U (b) Z
(c) W (d) Y
- 9 O P R S U V Z Y —

- (a) LM (b) NO
(c) OP (d) AB
- 10 Q N K H F —
(a) F (b) B
(c) F (d) A
- 11 E H K N Q —
(a) P (b) Q
(c) S (d) T
- 12 A C F J O —
(a) P (b) Q
(c) U (d) V

III **Directions** Questions 13 to 18 have disarranged letters serially numbered. By arranging the letters in proper order, meaningful words can be formed. The choices under each question contain serial numbers of the letters. Mark the choice which contains the serial number of a meaningful word.

- 13 R S S E F R O P O
1 2 3 4 5 6 7 8 9
(a) 867542391 (b) 876453219
(c) 154238789 (d) 915678342
- 14 H I S O O L F
1 2 3 4 5 6 7
(a) 3624571 (b) 4572613
(c) 7456231 (d) 4752613
- 15 S T T O O A M E
(a) 35762418 (b) 24762581
(c) 57362418 (d) 24762518
- 16 U R S O V L A F
1 2 3 4 5 6 7 8
(a) 86674213 (b) 13426587
(c) 86754123 (d) 68754213
- 17 N I G T N N E I D
1 2 3 4 5 6 7 8 9

- (a) 357624189 (b) 819764253
(c) 269714835 (d) 216748539
- 18 D T E N M C U O
1 2 3 4 5 6 7 8
(a) 18675432 (b) 18673542
(c) 18675342 (d) 18675342

IV **Directions:** In questions 19-24, disarranged letters are given. Each letter bears the alphabetic number of the letter (i.e. A=1, B=2, C=3, etc). Arrange the letters to make a meaningful word and mark the choice containing the correct serial number of letters that make a meaningful word.

- 19 N E E A M I X
(a) 5-14-9-13-24 5-1
(b) 14-5-9-24-13-1-5
(c) 5-24-1-13-9-14-5
(d) 5-24-1-9-13-1-5-14
- 20 S F H B R N A C
19 5 8 2 18 14 1 3
(a) 2-18-14-1-3-5-8-19
(b) 2 18 1 14 3-5-1-5
(c) 18-2 1 14-3 8 5-19
(d) 19-18 1 2-14 3-8-5
- 21 Y R U A D L N
25 18 21 1 4 12 14
(a) 12 1-21-4-14-25 18
(b) 12-1-21-4 14 18 25
(c) 12-1-21 14 4 18 25
(d) 12 1-21 14-18-4 25
- 22 H R A C S T
8 18 1 3 19 20
(a) 19-20-1 18-3-8
(b) 19-20-1-18-8-3
(c) 19-20-18-1-3 8
(d) 19-20-3-18-1 8
- 23 E T U O S D
5 9 20 21 15 19 9
(a) 15-21-20-19-9-5-4
(b) 15-21-20-19-9-4-5
(c) 15-21-20-19-4-9-5
(d) 15-20-21-19-4-5-9
- 24 E N R U A F C
5 14 18 21 1 6 3
(a) 6-21-18-14-1-5-3
(b) 6-21-18-14-1-5-3
(c) 6-21-18-14-1-3-5
(d) 6-21-14-18-3-5-1

V **Directions:** Questions 25 to 30 relate to CODING/DECODING. Find the principles taken for coding and mark the correct choice.

- 25 How will you code ACCOMMODATE if S and V are coded as 8 and 5?
(a) 26-24-24-12-14-14-23-22-26
(b) 26-24-24-12-14-14-23-26-22
(c) 26-25-25-12-14-14-23-26-22
(d) 26-24-12-14-14-23-21-26-22

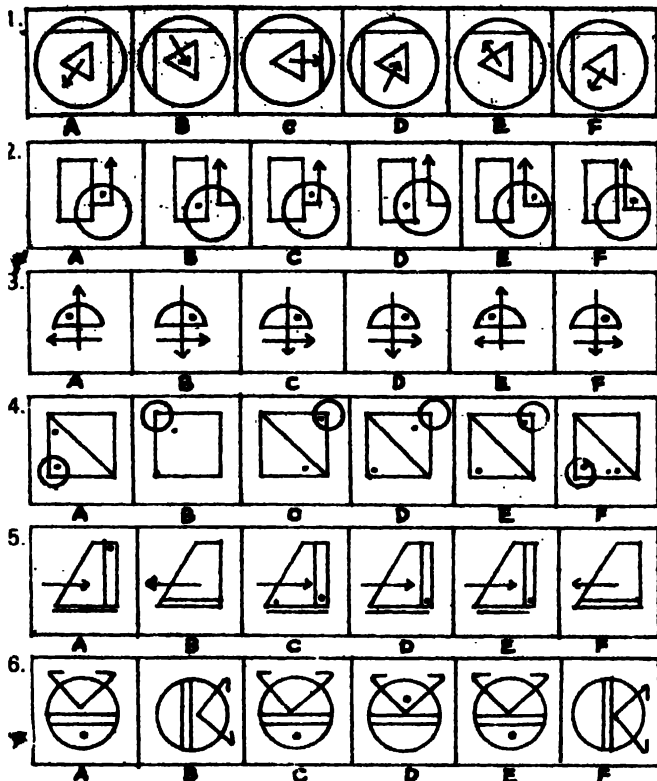
27. If 2-1-3-11-5-4 stand for BACKED, how will you write CARTONS?
 (a) 3-7-18-20-14-15-19
 (b) 3-1-18-20-15-14-19

28. If 11-22-8-18-7-24-18-23-22 stand for PESTICIDE, how will you write FERTILIZER?
 (a) 11-22-8-18-7-24-18-23-22
 (b) 11-22-8-7-18-24-23-22
 (c) 10-21-7-6-17-23-17-22-21
 (d) 12-23-9-19-8-25-19-24-23
29. If FIRE is coded for a secret message to be teleprinted as EHOD, how is the answer

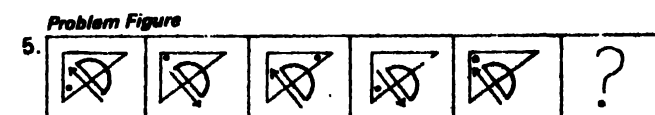
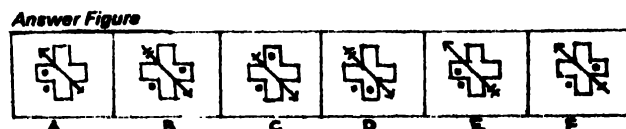
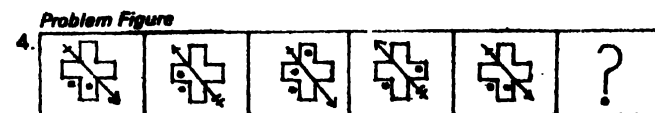
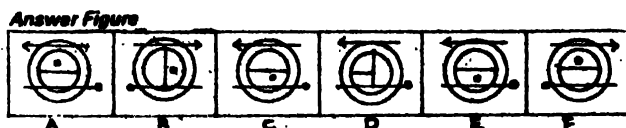
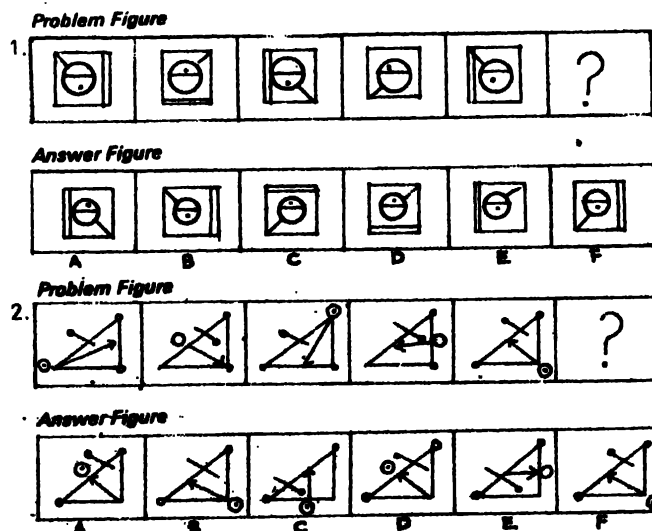
30. NEW is a secret code for MOVE. Telex a reply DIFFICULT using similar code as for MOVE above.
 (a) E-J-G-G-J-D-V-M-U
 (b) F-K-H-H-K-E-W-N-U
 (c) E-J-G-G-J-E-V-M-U
 (d) E-J-C-C-J-D-V-M-U

NON-VERBAL TESTS

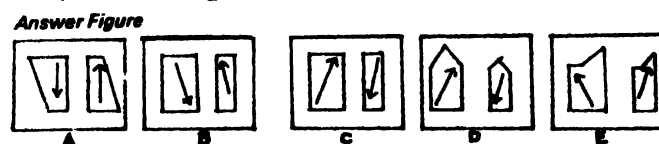
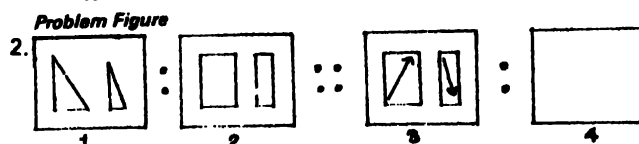
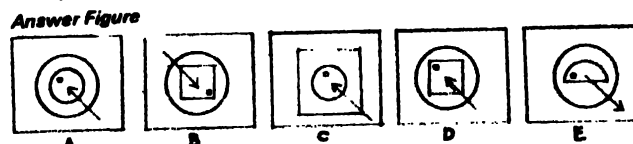
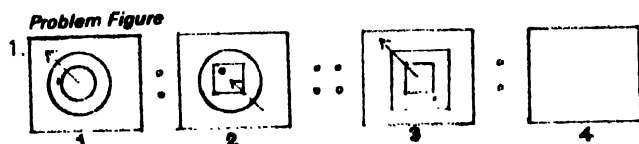
I. Spot the odd one out among the following set of figures:

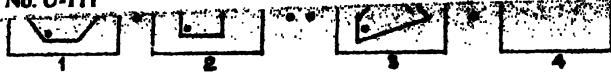


II. Name the serial number of the figure in the answer figures which will complete the series, i.e., fit in the last column of the problem figure:

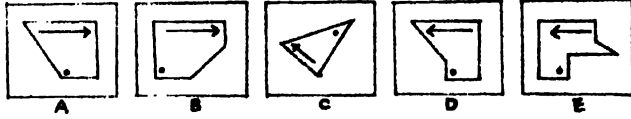


III. Find the relationship/analogy in the first set (2 figures) of problem figure. Based on the same analogy, find the suitable figure from answer figure to fit in the blank space in the following questions:

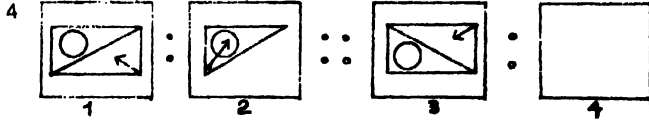




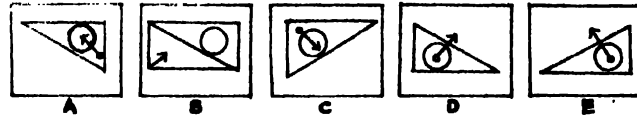
Answer Figure



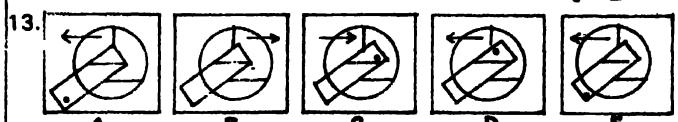
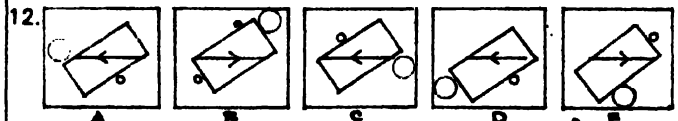
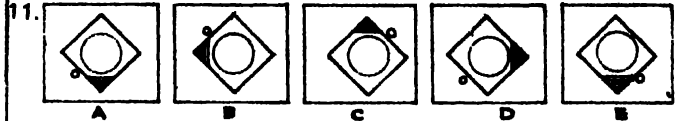
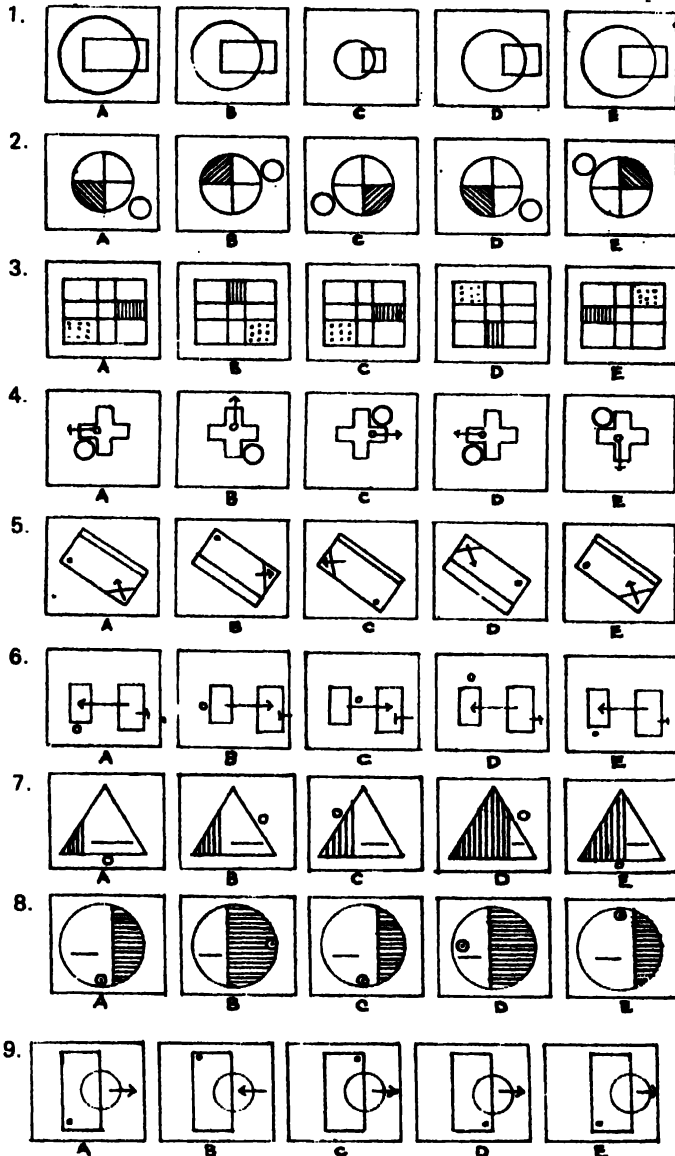
Problem Figure



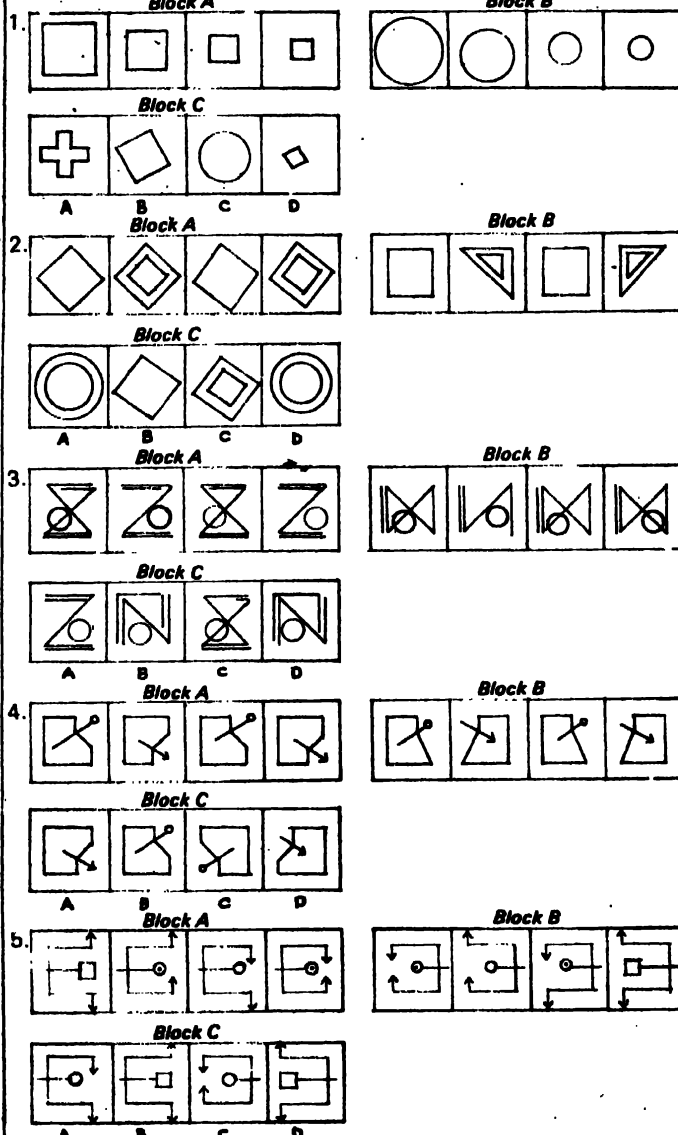
Answer Figure



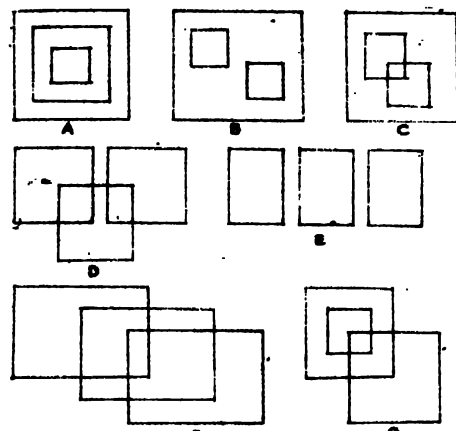
IV. Name the serial number of the two figures in the following questions which are out of position/place and require interchanging of position to put the entire series in order:



V. In each of the following questions, there are three blocks of figures A, B and C. Two figures in Block C have some similarity with the figures/pattern in Block A. In Block B there are some figures that match with Block A or are similar/have same analogy. You have to select two figures from Block C which bear similarity or are based on the same analogy as that of Block A. Block B will help you to determine the correct answer.



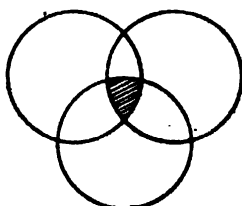
I Choose from the figures given below the diagrams to represent the relation among the three categories/classes of objects that follow in the terms in questions 1-15:



(Size and designs have no correlation here)

1. Asia, India, Calcutta
2. Cement, bricks, building construction materials
3. Crow, parrot, hen
4. Crow, parrot, birds
5. Tables, chairs, furniture
6. Married, bachelor, businessmen
7. *Newsweek*, *Dharmayug*, magazine
8. Teachers, graduates, people
9. Boys, naughty, serious
10. Stenographers, typists, hockey players
11. Slim, females, dancers
12. Married man, husband, father
13. Doctors, educated, bachelors
14. Punjabis, Sikhs, doctors
15. Punjabis, Sikhs, Hindus

II The diagram below depicts the students of B.Sc. final year:



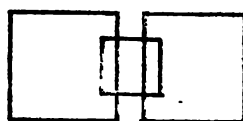
What does the shaded portion depict?

- (a) The students who study Chemistry and Physics
- (b) The students who study Physics and Maths
- (c) The students who study Chemistry, Physics and Maths
- (d) The students who study Chemistry and Maths

III The large square on the left represents Punjabis and the right represents Haryanavis. Which of the figures shows a correct representation of Sikhs and Christians?



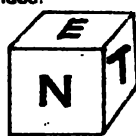
(c)



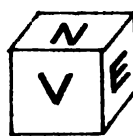
(d)



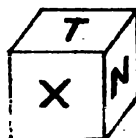
IV The four diagrams below are of the same alphabet cube, which has a letter on each of its six faces. All faces from figure A to C have three letters visible, except figure D in which one face is blank. Which letter should appear on the blank face?



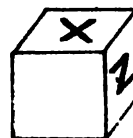
A



B



C



D

REASONING TESTS

1. In the following statements a situation is explained in two premises, followed by a conclusion. Decide whether

- (a) conclusion necessarily follows from the statements
- (b) conclusion is only a long-drawn one
- (c) conclusion definitely does not follow from the statements
- (d) conclusion drawn is doubtful

Draw your answer only from within the statements:

1. **Statements**

1. Milch cattle mostly live on grass.
2. Other animals also depend on grass.

Conclusion

Therefore, grass makes lawns look beautiful.

- (a) (b) (c) (d)

2. **Statements**

1. High calorific diet, full of carbohydrates, is good for labourers.
2. For desk-bound workers, excess sugar is harmful.

Conclusion

Therefore, for people who indulge in physical work, carbohydrates are not as harmful as for desk-bound workers.

- (a) (b) (c) (d)

3. **Statements**

1. Tuberculosis (TB) is a contagious disease but is curable.
2. Cancer is not contagious but is incurable.

Conclusion

- (a) (b) (c) (d)

4. **Statements**

1. Students, who study throughout the year, may succeed.
2. Both Ram and Sham are studying hard right from the beginning of the year.

Conclusion

Both of them must succeed.

- (a) (b) (c) (d)

5. **Statements**

1. Hard-working people come up in industries.
2. Hard-working people are generally well-paid.

Conclusion

Ramesh is hard-working and must be well-paid.

- (a) (b) (c) (d)

6. **Statements**

1. Happiness keeps a man away from diseases.
2. Ram keeps himself happy.

Conclusion

Therefore, Ram will never become sick.

- (a) (b) (c) (d)

II. In each of the following questions two or three statements are given, followed by a conclusion. Examine the conclusion separately in the context of the facts given and decide upon its degree of truth or falsity. Mark conclusions as follows:

- (a) Definitely true
- (b) Probably true
- (c) Data is insufficient
- (d) Probably false
- (e) Definitely false

1. **Statements**

1. When a gun fires, light and sound are both produced.
2. From a distance we see light first followed by sound

Conclusion

Therefore, light travels faster than sound.

- (a) (b) (c) (d) (e)

2. **Statements**

1. Patients of blood cancer become anaemic and show swelling on their feet.
2. There can be other reasons which make Ram anaemic.

Conclusion

Therefore, Ram is suffering from blood cancer.

- (a) (b) (c) (d) (e)

3. **Statements**

1. Chlorophyll gives green colour to plants.
2. It makes food for the plants by photosynthesis.

Conclusion

Therefore, chlorophyll is an essential component of the plant kingdom.

- (a) (b) (c) (d) (e)

4. **Statements**

1. There are several planets in our universe.
2. Some of them have the same atmosphere as earth.

Conclusion

Therefore, there may be possibility of human life elsewhere in our universe.

- (a) (b) (c) (d) (e)

QUANTITATIVE APTITUDE

FOR GIC, ASSTS' GDE, IES/ISS...

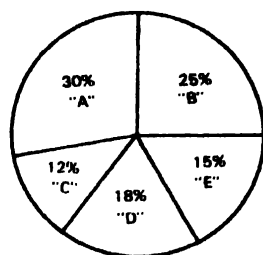
And now attempt this practice test meant for the AAO Exam of GIC, Assistants' Grade Exam, Indian Economic Service/Indian Statistical Service and other exams.

DIRECTIONS: For each question, tick mark the choice that best answers the question. Answers are given at the end of these tests.

DATA INTERPRETATION

I Study the following diagram which depicts household expenditure of a family on various main heads and answer the questions that follow:

HOUSEHOLD EXPENSES OF URBANITE FAMILY



- A = Expenses on food
House rent/water and electricity
C = Children's education (school fee/books/stationery, etc)
D = Clothing (summer/winter dresses/soft furnishing, etc)
E = Miscellaneous (Medical/holidays, entertainment/guests, etc)

1 Take-home pay of a family is Rs 2,200. How much amount on an average are they paying towards clothing/soft furnishing per month?

- (a) Rs. 300 (b) Rs 396
(c) Rs 264 (d) Rs 330

The above family is able to cut down various ear-marked household expenditure and is able to save 5% every alternate month and put the same away for emergencies. In case they do not use this amount at all for four years, how much amount will they have saved?

- (a) Rs 1,320 (b) Rs 1,100
(c) Rs 2,640 (d) Rs 2,460

A family is spending Rs 1,700 towards house rent, electricity and water, and Rs 2,040 towards expenses on food/milk/fruits, etc. The remaining amount being spent on items "C", "D" and "E" based on the diagram. What is the monthly income of this family?

- (a) Rs 5,800 (b) Rs 6,000
(c) Rs 6,300 (d) Rs 6,800

A newly married couple is together earning Rs 3,500. If they spend their monthly earning based on the diagram, how much can they save during the first two years of their marriage?

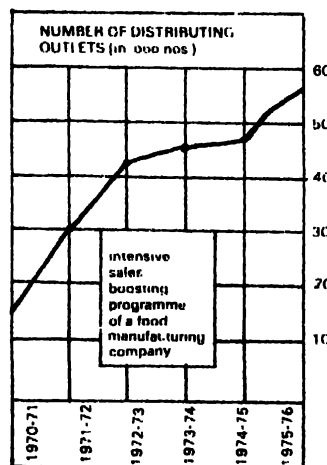
- (a) Rs 2000 (b) Rs 10,000
(c) Rs 10,080 (d) Nil

If a family is earning Rs 6,800 per month, how much rent per annum would they be paying?

- (a) Rs 1,700 (b) Rs 20,000
(c) Rs 20,400 (d) Rs 20,200
6. If a family spends Rs 6,800 per annum towards house rent including other amenities (water/electricity, etc), what should be their monthly income (take home salary)?
(a) Rs 3,500 (b) Rs 2,200
(c) Rs 6,800 (d) Rs 6,500
7. A family, earning Rs 3,500 per month, went on holiday for two weeks. How much could they have saved on food if they were staying with relations during the holidays?
(a) Rs 9/5 (b) Rs 1,050
(c) Rs 525 (d) Rs 515
8. If a family is spending 30% towards food, 25% towards house rent and 15% on miscellaneous expenses, what should be their monthly earnings if they spend Rs 816 per month towards their children's education?
(a) Rs 6,000 (b) 6,600
(c) Rs 6,800 (d) Rs 6,875

The following tests are designed to assess your ability to interpret data from graphs and diagrams and at the same time make simple calculations.

II The following graph represents aggressive sales activities undertaken by a food processing company during the period 1970-76. Study the graph carefully and answer questions that follow



- 1 In which year did the company's sales operations nearly double over 1970-71?
(a) 1974-75 (b) 1975-76
(c) 1971-72 (d) 1972-73
- In the year 1973-74, the total sales outlets of the company as depicted in the graph were nearly 45,000. This represents an

enhancement of the sales boosting programme undertaken by the company.

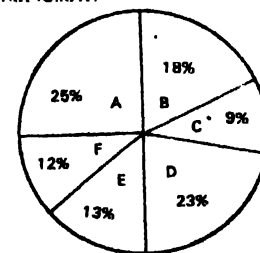
- (a) 3.5 (b) 2.0
(c) 4.0 (d) 4.5
3. The percentage increase achieved during 1973-74 over the period 1970-71 is —
(a) 400 (b) 300
(c) 200 (d) 450
4. In 1975-76 the growth over 1970-71 represents — times increase in the company's selling operations?
(a) 4 (b) 5
(c) 4-1/2 (d) 5-1/2
5. During which year was the growth rate of distribution system the highest?
(a) 1972-73 (b) 1973-74
(c) 1974-75 (d) 1971-72
6. During which year was growth rate the worst?
(a) 1972-73 (b) 1974-75
(c) 1973-74 (d) Progress was even during all the years
- III Study the following statement minutely and answer the questions that follow:

(Figures per 1000 persons)

Year	Birth rate	Death rate	Child ds
1978	80.7	71.3	20%
1979	51.8	41.7	19%
1980	54.3	44.2	20%
1981	60.7	50.6	19%
1982	75.2	65.1	21%
1983	79.2	60.1	17%
1984	78.3	66.4	22%

1. From the above table it follows that the maximum addition of population took place during the year —
(a) 1980 (b) 1982
(c) 1983 (d) 1984
2. Which year had the minimum growth in population?
(a) 1979 (b) 1984
(c) 1980 (d) 1978
3. Death rate remained static during —
(a) 1979-1980 (b) 1979-1982
(c) 1981-1983 (d) It did not remain static at all
4. Which year was the best from the over-all health/welfare point?
(a) 1984 (b) 1982
(c) 1979 (d) 1983

IV The following diagram represents the domestic budget of a family. Study the various expenditures involved and answer the questions that follow:

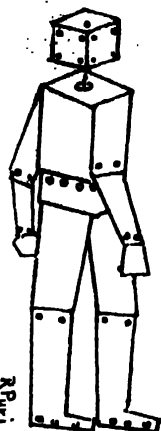


DOMESTIC BUDGET OF FAMILY "X"

- A = Expenditure of food
B = House rent
C = Entertainment
D = Education and maintenance of children

salary plus 10% as house rent subsidy on the monthly salary. If he pays 18% of his total emoluments as house rent, calculate the amount of house rent per month he is paying.

- (a) Rs 618 (b) Rs 600
(c) Rs 666 (d) 675
2. The statutory deductions towards Provident Fund @ 12% per month of the basic salary works out to be Rs—per annum.
(a) Rs 4,854 (b) Rs 4,845.6
(c) Rs 44.85 (d) 4,485.6
3. After Provident Fund deduction and payment of house rent, what is the take-home pay packet of the family X based on the above data?
(a) Rs 2,631 p.m. (b) Rs 2,600 p.m.
(c) Rs 2,355 p.m. (d) Rs 2,350 p.m.
4. What is the total amount per month the family spends on food and entertainment expenses?
(a) Rs 1,100 (b) 1,144
(c) Rs 1,104 (d) Rs 1,140
5. If the couple would have been newly married without children, what is the maximum amount they could have saved in addition to Provident Fund?
(a) > Rs 1,180.70 (b) > Rs 1,118.57
(c) — Rs 1,187.75 (d) (Rs 1,187.75
6. If a 12.5% increase in the salary is given, what will be the gross emoluments per month?
(a) Rs 4,248.31 (b) Rs 4,240.31
(c) Rs 4,206.20 (d) Rs 4,206.25



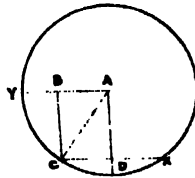
ARTIFICIAL MAN

Scientists have finally manufactured an artificial substitute for man himself. This artificial human being, jointly developed by human functions laboratory of the Swedish Institute of Architectonics and UNIDO, is used in the institute's microclimate laboratory. 'Eti-man' as it is called is a life-sized doll equipped with micro-processor sensors in various parts of its body. The changes in temperature of its skin surface are recorded and processed by a computer. Evaluation of these provides the answer to the question of how a living human being would react to changes in any given situation.

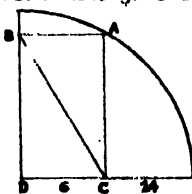
PROBLEMS

1. In the shortest possible time, solve the following problems based on the following diagrams:

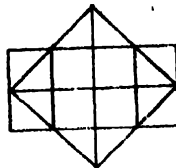
1. A is the centre of the circle. B A C D forms a rectangle. $CX = 12''$ and $AY = 10''$. What is the length of the dotted line AC?



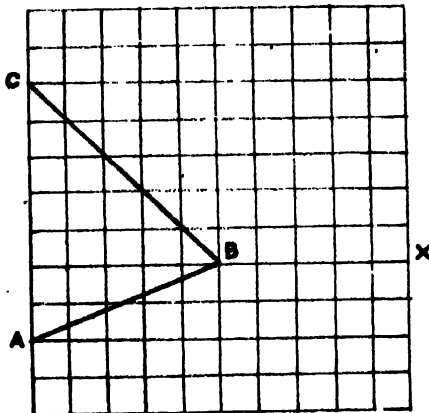
- (a) $12''$ (b) $22''$
(c) $10''$ (d) $15''$
2. The following quadrant contains a rectangle A B D C. Figures between D C line are given. What is the length of B C?



- (a) $16''$ (b) $32''$
(c) $8''$ (d) $20''$
3. How many triangles and squares are there in the following diagram?

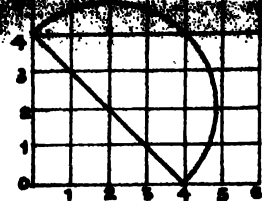


- (a) 16 & 12 (b) 12 & 24
(c) 24 & 12 (d) 12 & 16
4. The number of square units in the area of C A B is

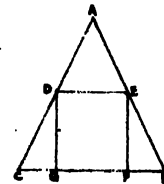


- (a) 15.5 (b) 10.0
(c) 17.5 (d) 20
(e) 12.4
5. In terms of the square units in the diagram below, what is the area of the semicircle in the graph?

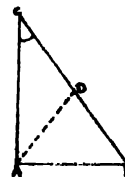
- (a) 2π (b) 4π
(c) 8π (d) 32π
(e) 16π



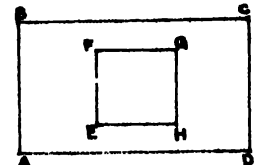
6. The area of the isosceles triangle ABC is 48. $AD = DC$ and $AE = EB$. Let x be the area of the rectangle DEFG. Then x equals—



- (a) 18 (b) 24
(c) 12 (d) 6
7. Triangle ABC is a right-angled triangle. If D is the mid-point of line BC and angle ACB = 40° , then angle BDA is equal to



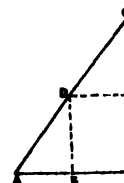
- (a) 4 (b) 5
(c) 6 (d) 8
8. EFGH is a square. Outside it, ABCD is a rectangle. $EF = 3$, $AB = 4$, $BC = 6$. The area of the region outside of EFGH and inside of ABCD is



- (a) 16 (b) 15
(c) 10 (d) 24
9. What is the area of figure given below? Given: ABCD is a rectangle and BDE an isosceles right-angled triangle



- (a) ab (c) $b(a + b/2)$
(d) cab
10. DF is parallel to CB. $AF = FB$. DF and FB = 3. What is the length of CB?



1. (e) There is no repetition of any letter in others except in (e).
2. (e) All words are concerning writing/reading except (e).
3. (c) All words have letter E in the end except (c).
4. (d) All words have one letter repeated except (d).
5. (c) The only word having one letter repeated.
6. (c) All other words are various forms of TAKE whereas (c) refers to a piece of furniture.
7. (c) There is a two-letter gap in the alphabetical order i.e., after A comes D; B & C are omitted. After E comes H; F & G are omitted. Hence, after M will follow P; N & O are to be omitted.
8. (d) Two letters are omitted in the alphabetical order, i.e., after M, N & O are omitted; after P, Q & R are omitted. Hence, letter Y should follow V.
9. (c) After two consecutive letters of the alphabet, one is omitted. After Q & P Q is omitted; after R & S, T is omitted. Z & Y should be followed by AB because Z has to be omitted and in circular sequence after Z comes the letter A.
10. (b) In descending order after each letter two preceding ones are omitted, i.e., after Q the preceding letters O & P are omitted and N is given.
11. (d) Two following letters after each given one are omitted, i.e., after E, F & G are omitted and H is given and so on.
12. (c) Omission of letters is increased by one after each letter, i.e., after A, B is omitted, after C two letters D & E are omitted, after F three letters G, H & I are omitted. Hence, after O; 5 letters are to be omitted, i.e., P, Q, R, S & T. Therefore, the next in the series is U.
- III 13. (a) professor 14. (c) foolish 15. (b) tomatoes
16. (c) flavours 17. (b) indenting 18. (b) document
- IV 19. (c) examine 20. (b) branches 21. (b) laundry 22. (a) starch
23. (b) outside 24. (c) furnace
- V 25. (b) 26. (b) 27. (b) 28. (b)
29. (b) C-N-M-D (Preceding letter is taken for coding following letter, i.e., B will be coded as A in this case).
30. (a) A is coded as B, C as D and so on. Hence D=E, I=J, etc.

Non-Verbal

- I 1. F-Note the direction of the arrow in the triangle and lines on the sides of the circle. Following the pattern of preceding figures, figure F is the odd one.
2. F-Note movement of dot. Figure F does not follow the pattern and as such is the odd one in the series.
3. C-There is a regular pattern in the movement of dots and changing of direction of arrows. Based on the preceding sequence, figure C is odd amongst other figures.
4. E-There is a regular pattern of movement of the circle across the square, movement of dots and increase/decrease in number of dots, and also the line in the centre of the square. Based on this pattern figure E is the odd one.
5. D-Movement of dots up and down, and direction of arrows differ each time and movement of vertical line on the base of the figure changes inside and outside. Based on the pattern in the preceding and following figures, figure D is odd here.
6. D-Note the movement of two lines inside the circle (one horizontal and the second vertical, movement of dot in alternate figures, and the movement of open triangle around the circle). Based on these parameters, figure D is the odd one here.
- II 1. D-The circle in the square is moving around the squares along with a line in clockwise direction. The dot in the circle is moving up and down from figure to figure. The square is having a double line in the first figure which is vertical and then, in the next figure, it becomes horizontal. Keeping the above correlation of movement of circle with line, movement of dot in the circle and horizontal and vertical line movement in succession, the figure in answer column D completes the series.
2. C-Keeping in view the movement of the small circle outside around the triangle, that is first circle having dot inside and second one blank and vice versa and the movement of the arrow inside the triangle and direction of pin and also movement of black dot on two sides of angle, the figure C accurately completes the series.
3. D-Note direction of arrows on top and pins at the bottom of the circle changing from one figure to the next and repeating the same half horizontal line is inside the circle. The figure in answer column D will complete the series keeping the above parameters in sequence.
4. E-Note changing direction of arrow and the dot inside and outside. There is a similarity of pattern and its change alternatively. Hence, answer figure E completes the series.
5. E-Note the movement of the dot from one angle to the other of the triangle and the direction of the arrow cutting across—the dot moving in clockwise direction from one angle to the other and the arrow moving once inside and once outside. Answer figure E fits in problem column to complete the series.
- III 1. D-Number of lines are increasing in the first two figures. In figure D lines have increased to 5 and the direction of arrows also match.
2. C-In the first two figures, number of lines are reducing. Based on this analogy, figure C has same relationship to figure 3 in problem figure. Dot and arrows have no correlation here.
3. C-In the first two figures, you will notice two circles with an arrow in figure one, and a circle with square inside in figure two. Based on this analogy, C fits in blank column.
4. A-Rectangular figures reduced to angular figure from figure 1 to 2 in problem figure. Keeping in view the arrow and the circle, figure A in answer column fits in the blank column.
- IV 1. Figures C and E interchange position. The size of the circle and the relevant rectangular figures are decreasing in size in each of the following columns.
2. Figures C, D & E interchange positions, i.e., figure E should replace figure C and figure C should go in column D and column D figure should come at the end. Reason: Shaded area is moving clockwise and the small circle outside is moving anti-clockwise.
3. Figure C should go in column E and figure E should go in column C. Reason: Dotted portion is moving anti-clockwise and the shaded column is also following the same movement pattern.
4. Figures D & E should interchange position. Reason: Smaller circle is moving around in an anti-clockwise direction and the arrow in clockwise direction. To set the sequence in proper order, figure D should come last.
5. Figures C & D should interchange position. Reason: the dot is moving around rectangular figure in a clockwise direction. The corner of the main rectangular figure is being cut following anti-clockwise movement and the arrow inside the triangle thus formed is moving inward and outward alternatively.
6. C & D should interchange. Reason: The small circle is moving around small rectangular figure in a clockwise direction, the arrow cutting both rectangular figures are changing directions alternatively. Similarly, the small nail-like figure is changing directions alternatively.
7. D & E should interchange. Reason: The small circle outside is moving in an anti-clockwise direction. The shaded portion of the triangle is increasing in each following figure.
8. C & E should interchange. Reason: The shaded area in the circle is increasing in each figure. The small circle inside the main circle is moving in an anti-clockwise direction.
9. D and E should interchange. Reason: The dot is moving in a clockwise direction inside the rectangular figure. The arrow is changing direction alternatively in the circle cutting across the rectangular figure.
10. C and D should interchange. Reason: The Circle is moving from one corner to another in an anti-clockwise direction. The arrow is changing direction alternatively in each subsequent figure. The horizontal line across the base line of the rectangular figure is once touching left line and then right line of the vertical sides of the rectangular figure alternatively.
11. D and E should interchange. The Small circle is moving across in a clockwise direction. The shaded column is moving also along with the circle in a clockwise direction.
12. D and E should interchange. Note the movement of the large circle outside which is in a clockwise direction. The same pattern is followed by the smaller circle. The direction of the horizontal line is changing alternatively.
13. C and D should interchange. Reason: The dot in the rectangular

- V. 1. B & C-In Block A the squares are becoming smaller in each figure. In Block B the circles are becoming smaller in size in each column. In Block C, squares in columns B & D have the same correlation.
2. B & C-The single square is followed by the double square (square inside another square). Same pattern is followed in Block B but here after a single square double triangles are given. In Block C, figures B & C follow the pattern of Block A.
3. A & C-Careful observation will reveal that Block C has similar figures in the same sequence as in Block A.
4. A & B-Direction of arrows and pins (line with circular head) has a specific pattern in Block A. Based on this, figures A & B follow the same pattern as in Block C.
5. A & B-Answer is obvious. Figures A & B in Block B follow a certain sequence which is obvious in Blocks A & B

Logical Diagrams

1. A Calcutta is in India. India is in Asia.
 2. B Cement and bricks are two different materials. But both are building construction materials.
 3. F All are different types of birds but both come in the category of birds.
 4. B All are different types of birds.
 5. B Tables and chairs are two different items but both are included in the class of furniture.
 6. D Some married men and bachelors are businessmen. Some businessmen are both married and bachelors. Some businessmen are not married and some are not bachelors.
 7. B Both are magazines, different in nature but are included in the category of magazines.
 8. C Some teachers are graduates and some graduates are not teachers and vice versa. But both teachers and graduates are included in the category of people.
 9. D Some boys are naughty and some are serious. But no naughty boy is serious and vice versa.
 10. C All stenographers are typists. Some typists and some stenographers are hockey players.
 11. F Some slim persons are females. Some females are slim. Some females are dancers. Some dancers are females and slim persons.
 12. G All husbands are married men. Some married men and husbands are fathers.
 13. G All doctors are educated. Some doctors are bachelors. Some bachelors are educated, but are not doctors.
 14. F Some Punjabis are Sikhs. Some Sikhs are doctors and vice versa. Some doctors are Punjabi Sikhs and vice versa.
 15. B Sikhs and Hindus both profess different religions but belong to the same class, i.e., Punjabis.
- II. (c) The shaded portion is common to all the three circles. Therefore, it represents those students who are studying all the three subjects.
- III. (c) The Sikhs and Christians both live in Punjab and Haryana.
- IV. Letter V

Reasoning Tests

1. (c) 2. (a) 3. (c)
 4. (d) "may" in first statement brings a chance factor which makes the conclusion doubtful.
 5. (d) "generally" makes it doubtful.
 6. (b) Statement 1 is very general and cannot be applied to all cases. So the conclusion is a long-drawn one.
- II. 1. (a) Both scientifically and logically (based on arguments) it is true.
2. (c) Data is incomplete as Ram is showing only one symptom.
 3. (b) It can be true but we cannot arrive at 100% correct conclusion from the given statement.
 4. (c) Statements 1 and 2 do not support the conclusion and as such data is not enough.

QUANTITATIVE APTITUDE

Data Interpretation

1. (b) 2. (c) 3. (d) 4. (b)
4. (c) The newly married couple can save 12% (C), that is, expenses

- II. (c) 2. (c) 3. (b) 4. (a) 5. (d) 6. (b)
- III. 1. (d) 2. (d) 3. (b) 4. (c)

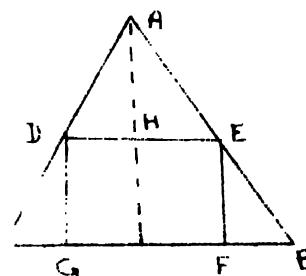
Explanation: Death rate and child death rate are to be kept in mind. These two factors affect the growth of population in a given year.

- IV. 1. (c) Basic salary = Rs 3,365
10% house rent = 336.50
Total emoluments = Rs 3,365 + Rs 336.50 = 3,701.50
18% of total emoluments = Rs 666.27, round off to Rs 666
2. (b) $3365 \times 12 = 403.8 \times 12 = 4,845.6$
100
3. (a) Total emoluments = Rs 3,365 + 336.50 = 3,701.50
 $3,701.50 - 1,070.07^* = 2,631.44$
* House rent Rs 666.27 + P.F. Rs 403.8 = 1,070.07 to be reduced from the total emoluments to get take-home pay packet.
4. (b) Expenses on food = 25% of 3365 = 841.25
Expenses of entertainment = 9% of 3,365 = 302.85
Rs 841.25 + Rs 302.85 = Rs 1,144.10
12% Provident Fund = Rs 403.80 23% education & children maintenance = Rs 773.95 Total Rs 1,187.75
As they would have no children being newly wedded. Some they can save from miscellaneous also. Hence more than Rs. 1,187.75 can be saved by them.
Total basic salary = 3,365 per month
12.5% increase = $3,365 \times 12.5/100 = 4,206.25 + 42.06(^*) = Rs 4,248.31$
(*) 10% house rent subsidy on the basic salary

Geometrical Problems

- (c) 2. (b) 3. (c) 4. (c)
- (b) 6. (b). See explanation

Explanation: Because is isosceles, the DCG = EB. Draw a perpendicular from A to CB, intersecting DE at H. Then AHD, AHE, DGC and EFB are all congruent. So $DE = CG + FB$ or $1/2$ of BC. Also DG must be $1/2$ of the altitude of ABC. Since 48 is $1/2$ the altitude times BC, the area of DEFG is $1/4$ of BC times the altitude. The area of DEFG is half of 48 = 24.



7. (b) 8. (b) See explanation
- Explanation:** Since EFGH is a square, the area of the same is 3×9 . The area of the rectangle ABCD is length times width or $4 \times 6 = 24$. Thus the area outside the square and inside the rectangle is $24 - 9 = 15$.
9. (b) The area of a rectangle is length \times width. So area of ABCD is ab . The area of a triangle is one half of the height times base. Since BDE is an isosceles right angled triangle, the base and height both are equal to b . Thus area of BDE is $1/2 b^2$ or $b(a+b/2)$.
10. (d) Since DF is parallel to CB, the ΔADF and ΔACB are similar. Therefore the corresponding sides are proportional. So DF is to CB as AF is to AB. Since $AF = FB$, AF/AB is $1/2$. Therefore, CB is twice DF = 8.

Prepared by E. I.

NEWS CAPSULE

AWARDED

The 1985 **Asan World Prize for Literature**, instituted in the memory of Mahakavi Kumaran Asan, to noted Indo-Anglian poet Kamala Das, the first Indian to receive the prize. Previous recipients of the award are Leopold Senghor (Senegal), Nicholas Guillen (Cuba), Judith Wright (Australia).

The **Japan Prize for Technological Research** to John R. Pierce, visiting professor emeritus at Stanford University, and Ephraim Katchalski-Katzir, professor at the Tel Aviv University, Israel. Pierce was cited for his work in inventing the Pierce Gun, used in microwave and satellite communications, while the Israeli was honoured for his research in enzymes used in food additives and antibiotics.

The \$100,000 **Third World Award**, the developing nations' equivalent of the Nobel Prize, to former West German Chancellor, William Brandt. The award is conferred annually on individuals, or institutions for outstanding contribution to Third World development in economic, social, political and scientific fields.

The 1985 **Pulitzer Prize** for Journalism (public service) to The Fort Worth (Texas) Star-Telegram for work by Mark J. Thompson, for general news reporting to: Thomas Turcol of Pilot and Ledger Star (Virginia); for investigative reporting to: William Mallow of the Philadelphia Inquirer and Lucy Morgan and Jack Reed of St Petersburg Times, for explanatory journalism to: John Franklin of the Baltimore Evening Sun, for specialised reporting to: Randall Savage and Jackie Crosby of the Macon Telegraph and News, for national reporting to: Thomas Keadron of the Des Moines Register, for international reporting to: John Friedman, Dennis Brel and Omer Mukhammad of Newsday, Long Horn, for Drama to: Stephen Sondheimer. **Sunday In The Park With George** for fiction to: Stuart Turkle's **Foreign Affairs**; for general non-fiction to: Stuart Turkle's **The Good War - An Oral History Of World War Two**; for biography to: Kenneth Silverman's **Life and Times of Cotton Mather**.

The **Olympia Prize** for 1985, carrying a cash award of \$100,000, to K.K. Franjo, an irrigation expert, for his activities in bringing about major changes in planned water resources. Sharing the award, conferred annually by the Alexander Onassis Public Benefit Foundation of Greece is the Royal Academy of The Netherlands for their complete and authentic edition of the works of Erasmus.

APPOINTED

Amol Palekar, noted film and stage artiste, as Chairman of the Childrens Film Society (CFS), replacing V.S. Jala, Joint Secretary in the Information and Broadcasting Ministry, who has been looking after CFS since last August.

Admiral O.S. Dawson (retd) as the Indian High Commissioner to New Zealand. Dawson is expected to take up his post shortly.

Pranab Mukherjee, the former Finance Minister, as the President of the West Bengal unit of the Congress (I), replacing Ananda Gopal Mukherjee who is ailing.

Zaid Rifai, who headed three Jordanian governments during 1973-76, as the PM of Jordan following the resignation on Apr 4 of the incumbent Ahmed Obidat.

ELECTED

Congress (I) General Secretary **A.K. Antony**, Thomas Kuthiravottam of the Kerala Congress and N.E. Balaram, a member of the CPI national council, to the Rajya Sabha.

VISITED

British PM Margaret Thatcher on Apr 13 on a day's official visit during which she had a formal round of talks with PM Rajiv Gandhi. Besides bilateral issues, the two leaders discussed North-South issues, the world economy, the gulf war and disarmament.

New Zealand PM David Russell Lange on Apr 15 on a brief stopover during which he met President Zail Singh and PM Rajiv Gandhi and addressed a press conference. Lange told reporters that his talks with Indian leaders were "extraordinarily useful" and that he looked forward to expanding economic ties between New Delhi and Wellington.

Guo Qinglan Kotnis, the aging Chinese widow of the legendary Dr Dwarkanath Kotnis who undertook a medical mission to China in 1938, on Apr 1 on a three-week visit to India. Guo Qinglan said her visit was in connection with the inaugural function of a pictorial exhibition of the Indian medical mission on Apr 5.

SCIENCE

Quasars and galaxies: Astronomers have discovered strong evidence that many galaxies, including our own Milky Way, may have once been quasars, huge objects that once produced the light of billions of suns. The findings by Wallace Sargent of the California Institute of Technology are the first to clearly support a theory that several normal galaxies are actually dying quasars. Quasars, located upto 10b light-years from the earth, produced an intense, brilliant glow during the universe's infancy by sucking in enormous quantities of surrounding gas and dust. Some astronomers theorise that since quasars seem to have vanished a long time ago, they used up this fuel and began producing a waning light, eventually evolving into normal galaxies. In their study, Sargent and his assistants discovered 75 bright galaxies between 10m and 50m light-years from earth. They intend to examine 500 galaxies during the next few years using various telescopes, until the launching of the space telescope aboard a shuttle in 1986.

Genetic material from the ancient past: Scientists have extracted human genetic material from an year-old Egyptian boy mummified around 400 B.C. and grown it in tissue culture in a laboratory. This is the first time that scientists have been able to extract specimens

of Deoxy Nucleic Acid (DNA) from an ancient human or earlier primitive man and reproduce the material in a controlled environment. Scientists led by Svante Paabo of Sweden investigated 23 mummies for DNA content in a series of experiments studying evolution. Comparing DNA taken from living organisms and dead organisms might sort out relationships between species and help find out man's closest living relatives, such as the chimpanzee.

France designs Hermes: France is designing a manned space shuttle expected to be about half the size of its American counterpart, cheaper, more profitable and as reliable. The shuttle called Hermes, is expected to give Europe access to the lucrative extraterrestrial markets of the future. A test flight of Hermes is scheduled to take place by 1990 and by 1997, it should be in operation. It is expected to carry about six astronauts along with 4.5 tonnes of equipment, against the eight people and 32 tonnes carried by the American shuttles.

EDUCATION

New education policy: The Centre has fixed the academic year 1986-87 for implementing its new education policy. Education Minister, K.C. Pant, told the Lok Sabha on Apr 8. The preliminary document assessing the present state of education had already been prepared and the next step was a vigorous diagnostic exercise to find out the weaknesses of the present system. That would be followed by the enunciation of the new policy with a built-in strategy of action and implementation. Pant said the new policy would make education an effective instrument to take India into the 21st century. Pant told the house that some 64m additional children would be brought into schools during the Seventh Plan period, with at least 26m passing through the formal system and the rest through the non-formal system. Pant said he wanted to make adult education a people's movement and take measures to bring down the drop-out rate, now an alarming 76%.

Education report: The 1983-84 trend among students taking to higher education seems to favour arts rather than science or commerce subjects, only 1.3% of the students enrolled in universities and colleges opting for research. According to the annual report of the department of education, the enrolment of women in universities and colleges rose from 800,000 in 1982-83 to 977,000 in 1983-84. According to the report, Buddhist, Gandhian and Nehruvian studies have recently acquired growing importance. While Buddhist studies have been introduced in Pune, Andhra and Sagar universities, Gandhian and Nehruvian studies are to be promoted as a subject for research.

DEFENCE

The annual report of the Defence Ministry for 1984-85 has expressed concern at the induction of foreign security and intelligence agencies in Sri Lanka, and the island nation's unilateral declaration of a surveillance zone around its northern and eastern zones. At the

India's well-intentioned decision to erect a barbed wire fence along its border with Bangladesh had been made a political issue by Dhaka. In India's relations with China, there had been a significant change: the border issue had not been settled despite five rounds of talks and "China in the meantime has launched a massive programme of modernisation of its defence forces". The report expressed concern at Pakistan's relentless pursuit of nuclear weapons capability with the assistance and connivance of "certain countries". The likely nuclearisation of the region was one of the biggest problems confronting the sub-continent, it said. The increase in naval and military presence of big powers in the Indian Ocean area posed a great threat to the sovereignty and independence of the littoral states, it pointed out.

Battle tank christened: General A.S. Vaidya, Chief of Army Staff, on Apr 20, christened the country's Main Battle Tank (MBT), in the making for the last decade and a half, as Arjun after the legendary hero of the Mahabharata. It was earlier expected to be named Chetak after the wonder horse which carried Maharana Pratap after one of his feet was cut off in the battle of Haldighati. The MBT, which has been developed at a cost of Rs 600 crores, is equipped with a powerful gun with highly lethal fin-stabilised armour.

ENVIRONMENT

Long-awaited scheme: The Central government will shortly launch a massive afforestation scheme to prevent ecological damage and the national forest policy is being revised in favour of forest conservation. Guidelines have already been issued to the states and Union territories for the preparation of working plans to protect and promote forest wealth. An in-depth study is being made to work out the modalities for relieving the pressure on forests. Import of pulp and wood chips by user industries is to be totally exempted from customs duty, among others.

NEIGHBOURS

Ershad withdraws concessions: Bangladesh President, H.M. Ershad, on Apr 3 announced he was withdrawing all concessions offered to the opposition parties for their participation in the parliamentary elections because of their unwillingness to take part in the elections. Ershad said he would continue as President till the elections under the suspended Constitution were held. Incidentally, he has extended his tenure by another year. The concessions earlier offered were a phased withdrawal of martial law, release of all political detainees and scheduling of the parliamentary polls before the presidential election.

China-Bhutan reconciliation: China and Bhutan will make every effort to settle their border disputes, now 25 years old, according to a joint statement issued on Apr 7 at the end of the second round of Sino-Bhutanese talks in Thimpu. China and Bhutan have no formal diplomatic ties. In 1959, after China suppressed a rebellion in Tibet, Bhutan banned cross-border trade with China. The first round of border talks held in Beijing last year marked the first contact between them since then.

The Indian Government has announced that about 10% the royalty to be paid by foreign expeditions attempting to scale any Himalayan peak in the kingdom. The Everest, to scale which expeditions were paying Rs 50,000, will be costlier by 10%. All other peaks above 8,000 m will be available to expeditions for Rs 44,000 against Rs 40,000 earlier. This is the second enhancement announced by Kathmandu in less than a year and will be effective from the next fiscal year beginning Jul 16.

Afghan elections in 1985: Afghanistan has announced that the country's first elections in five years will be held sometime this year to choose a new National Assembly and the new body will try to halt the war now raging in the country. The Assembly will be composed of delegates from across the country, representative of various progressive professions and labouring groups, members of the Afghan Communist Party and the various wings of government. The proposal to create the National Assembly, made by President Babrak Karmal, has been approved by the revolutionary council of the Marxist Government.

Beijing-China satellite link: A satellite link will be set up between Kathmandu and Beijing, according to an agreement reached between Nepal and China. China has also promised Nepal other help in telecommunications development. A satellite link between Kathmandu and Lhasa has also been discussed and agreed to in principle.

ECONOMY—National

Sri Lanka has resumed import of Indian textiles after a one-year break. The fabrics will be converted into garments for export to the US and West European markets. Sri Lanka's import of Indian fabrics had fallen after the July 1983 ethnic violence and dried up completely by 1984.

Welcome instructions: Chiefs of nationalised banks have been instructed not to take cognisance of oral instructions from any ministry in regard to individual loans, personnel

moving any one of them. Instructions regarding loans to individual parties or companies or in any manner influence the commercial judgement of the banks. The Finance Minister V.P. Singh, will personally monitor the implementation of these instructions.

NCAER's study: The Indian economy has moved from one phase of development to another where the present development strategy needs to be modified, says a study prepared by the National Council of Applied Economic Research (NCAER). The study discusses the trends in income, consumption and savings and points out that the structural change in these has been in directions that are not only desirable but contain "a whole lot of new stimuli" for a more promising growth potential. The savings rate will not reach the targeted 26% rate in 1985-86 as assumed in the approach paper to the Seventh Plan. Preliminary estimates put it at only 23.7%. With regard to consumption, the study finds an upward trend in consumer demand along the hierarchy of consumer goods that signify a major change in consumer behaviour. The production of consumer goods must be allowed more liberally in factory units of appropriate size. On income, the study says the share of industry and services in the GNP would be more than what is revealed in the national accounts.

Private traders to export wheat: The Centre is allowing private traders to export wheat for the first time in what is seen as a desperate bid to empty government godowns stocked with nearly 15m tonnes of wheat. The government has also removed all restrictions on accumulation of wheat stocks by traders. The steps come on the eve of the arrival of the rabi crop in the markets; storage space has to be found for new wheat procurement. The total foodgrain stock with the Centre and the states at the end of March stood at nearly 22m tonnes, of which rice accounted for nearly 7m tonnes. While the huge buffer stock helped stabilise prices, they also put a heavy financial burden on the government.



The Vice-President, R. Venkataraman, presenting the Jnanpith Award to Dr Masti Venkatesha Iyengar, renowned Kannada writer, in Bangalore on Apr 13. Others seen in the picture (left right) are the CM Ramakrishna Hegde, the Governor, A.N. Banerji, A.K. Jain, Managing Trustee, Bharatiya Jnanpith, S.P. Jain, Chairman, Bharatiya Jnanpith, and the Defence Minister, P.V. Narasimha Rao.

1985 as the year to catch tax-evaders and concentrate on high-quality assessments instead of wasting time on routine. Singh told a three-day annual conference of income-tax commissioners in New Delhi that he would closely watch the progress of the cases launched by them for prosecution. Singh said he believed that "if the rod is applied along with the tax reliefs, there will be higher revenue realisations." He assured the commissioners that he would not pardon anyone on whom they had applied the rod, however mighty the evader might be.

Import-export policy given a new look: The government on Apr 12 announced a highly liberalised import and exports policy for three years ending March 1988, incorporating a large number of innovative procedural changes to make imports and exports easier for increased industrial production and to strengthen the base for exports. The policy, however, retained the licensing on an annual basis, abolished the category of automatic licenses and shifted items under the category to the Open General Licensing (OGL). In sum, the policy put a large number of items under the OGL to make their imports easier, and decentralised the decision-making in regard to imports. The policy introduced for the first time the import-export pass book scheme to provide duty-free access to imported inputs for export production.

Poised for growth: The economy is poised for an accelerated rate of industrial production aided by record agricultural production and favourable investment climate, according to the annual report of the department of industrial development. The general index of industrial production registered a much higher growth rate of 6.6% during April to November 1984, compared to 4.4% during the same period the year before. The rate of growth in the composite index of six infrastructure industries was 10.2% during April 1984 to January 1985. It was 6.2% in the same period of the previous year. The six infrastructure industries are electricity, coal, saleable steel, petroleum refinery industries, crude petroleum and cement. An analysis of growth of 18 major industries in the manufacturing sector shows that 11 groups registered a positive growth during April to October 1984. The public sector industries recorded a growth of 15.6% during the first nine months of 1984-85. The cumulative production of the public sector enterprises during April to October 1984 was valued at Rs 39,530.06 lakhs, 15.6% higher than during the same period of the year before. There was all-round progress in the small industries sector during 1983-84, with the value of production going up by 9.8%. The overall production in the khadi and village industries for 1984-85 was estimated at Rs 1,000 crores compared with Rs 874.92 crores during 1983-84.

THE QUARTERLY REVIEW

The vast readership of our magazine, which responded to the opinion poll on the popularity of our feature *The Quarterly Review*, was not in favour of continuing it. We, therefore, propose to discontinue the feature from June 1985. Our thanks to all those who responded to the poll.

Rs 9,258.7 crores during the period of the previous year. Exports during April-January 1985 are placed at Rs 9,258 crores compared to Rs 7,807.7 crores during the same period in 1983-84—an increase of 18.6%. Imports during the first 10 months went up by 8.4% to Rs 13,122 crores against Rs 12,102 crores during the corresponding period, last year.

ECONOMY—International

Role of small and medium industries in technology transfer: The UN Conference on Trade and Development (UNCTAD) has called for a more active role by medium and small enterprises of developed countries in global technology transfer. The slower rates of growth and the stagnating domestic demand encountered by industrialised countries since 1970 have spurred rationalisation and redeployment processes in their national economies acting as a major push-factor for small enterprises, UNCTAD says. Stricter national legislation and achievement of a host of technological breakthroughs have reduced some of the barriers faced by the small enterprises in entering international markets, the UNCTAD notes.

Energy crisis again? Though there is hesitancy in using the term energy crisis now, given the lull in the oil market, the present phase is only the proverbial calm before the storm, says *OPEC Review*, a quarterly published by the Organisation of Petroleum Exporting Countries (OPEC). Drilling activity worldwide has trailed off and there was a 34% decrease in the number of active rigs from 1981 to 1983 end. The periodical points out that from 1973 to 1982, an estimated 420b were spent outside the OPEC area for a gain of slightly less than 6m barrels per day. "This is one of the costly consequences of the OPEC price increase, or to put it another way, to do without OPEC," it added.

Task force to alleviate debt burden: The IMF has recommended the creation of a task force to consider ways of alleviating the debt burden of developing countries. While industrialised countries borrowed from their domestic markets for growth, the developing ones depended mainly on external borrowings.

Group of 24 concerned: The Group of 24 has expressed concern at the decline in flow of resources to the developing countries, the debt situation, the increase in protectionism, the high level of interest rates and the misalignment and volatility of exchange rates. At their 31st meeting in Washington on Apr 16, finance ministers of the group urged that resources of international financial institutions be further strengthened to enable them to play a more effective role in the development and adjustment process.

IMF-World Bank development committee sessions: Finance ministers and national bank governors attending the week-long IMF-World-Bank interim and development committee sessions in Washington, concluded their discussions on Apr 19 with favourable words for increased world trade and less protectionism and renewed faith in the international financial and economic institutions. But they were neither able to agree on any encouragement for the developing countries' hopes for

of the Group of 24 demands had managed to be inscribed in the agenda and the concluding communique of the development committee. Ministers representing the developing countries, led by Finance Minister, V.P. Singh, were unified in insisting that the industrial countries first implement their 1982 commitments regarding trade liberalisation and easier market access for developing nations' goods.

STATES

Himachal Pradesh has a particularly high incidence of cancer, with one out of 2,000 suffering the disease, according to a survey conducted by the Postgraduate Institute of Medical Education and Research, Chandigarh. Tobacco-chewing, and smoking and consumption of hot liquids and local brew are believed to be the main reasons. In certain parts, herbal plants commonly used to prepare tea or other drinks are also believed to have caused cancer. The survey also found that five out of 1,000 people also had pre-cancer lesions.

Sites and services to squatters in Maharashtra: The Maharashtra Government has taken up a massive housing project under which sites and services will be provided to squatters to build their own huts. The project, which will cover the low-income groups in the Thane and New Bombay areas, is being aided by the International Development Agency (IDA) which is lending the government Rs 138 crores. The total cost of the project, beginning May, will work out to Rs 282 crores.

Barbed wire fence to check Chakma influx: A barbed wire fence will be erected to prevent the influx of Chakma tribals into Mizoram from the adjoining Chittagong hill tracts. The Mizoram Government has endorsed the proposal for the fence mooted by the Central Government. The influx of Chakmas had led to a warning from former CM, Brig Sailo, that one day the foreigners, encouraged by Dhaka, could claim the encroached land as their own which would mean giving up a sizeable part of Indian territory to Bangladesh.

Miyabhoj commission's indictment of foreign students: The Justice Miyabhoj inquiry commission set up by the Gujarat Government to review the prohibition policy, has blamed foreign students for the widespread use of drugs in M.S. University, Baroda. The report of the commission directs the government to alert vice-chancellors of the state's universities to the problem and formulate measures to combat the problem. The commission attributed the failure of the prohibition policy to inadequate education and propaganda measures. It recommended that the state government start centres for the treatment of alcoholics and offer incentives to reformed drinkers.

EVENTS—National

Strategy to combat poverty: The government proposes to enable at least 4m tribal families to cross the poverty line during the Seventh Plan-period. The main points of the strategy, formulated by a working group, to achieve the target would be: raise productivity in agriculture, forestry, horticulture, animal husbandry and small industries; give high priority

CAREER NEWS

UWC SCHOLARSHIPS

Education is a force to unite nations and peoples. This is the basis on which the United World Colleges (UWC)—co-educational and residential—situated in the UK, Canada, Singapore, Africa, USA and Italy, conduct courses following the two-year International Baccalaureate (IB) curriculum, an internationally recognised school-leaving exam.

The college offers scholarships (around USD 10,000 per year) to cover all expenses for the two years of study. If the idea is attractive enough and you are going on 16 (though not more than 18), you may write to Captain R.B. Mohindra, Executive Director, United World Colleges, C/o Mohindra Ugino Steel Co Ltd, Balkhtawar, Nariman Point, Bombay-400 021.

Your request for application should be accompanied by a self-addressed envelope (23 cmX10 cm) affixed with stamps for Rs 1.50 and an IPO for Rs 10 drawn in favour of the Indian National Committee, United World Colleges, Bombay. Last date for submitting the completed forms is Jun 15. For details see *The Hindustan Times* of May 8.

CERA '85

Are you in search of the unknown? Do you have a penchant for research work? Well then, be prepared to take the Common Examination for Research Admission (CERA '85) to be conducted by IIT Bombay/Delhi/Kanpur/Kharagpur/Madras on Jun 28, 1985 for admission to,

which hold a master's degree in Science, Humanities and Social Sciences. You are also considered eligible if you are in the final year of a master's degree programme.

It may be noted that those seeking admission to Master of Design, IIT Bombay or MS (Industrial Management), IIT Madras in the academic year 1985-86, should also take CERA '85.

For application form and information booklet, you may write to the Chairman, GATE of any of the IITs, alongwith an IPO for Rs 10 drawn in favour of the concerned institute alongwith an unstamped self-addressed envelope 17X27 cm. Last date for submitting forms is Jun 4. For details please see *Employment News* of May 4.

ITB Constables

Would you 'dare' to work as a constable with the Indo-Tibetan Border Police (ITB)? You just have to be a matric or equivalent and a male in the age-group of 18-23.

For application proforma and other details please see *Employment News* of May 4. Your completed application, accompanied by a crossed IPO for Rs 5 (Rs 1.50 for SC/ST candidates) payable to the Commandant, Transport ITB Police, should reach the Commandant, Indo-Tibetan Border Police, Seemanagar, P.O. Airport, Chandigarh-160 003 on or before Jun 1.

Management Trainee Engineers

Bharat Aluminium Company Ltd (BALCO), a Government of India enterprise, offers excellent opportunities for graduate engineers (SC/ST candidates only) to be trained as Management Trainees, in their Kobra Aluminium Project.

India and the US have identified several new areas in science and technology for joint research and pledged to further strengthen existing cooperation. An agreement to this effect was signed in New Delhi on Apr 10 at the end of a three-day meeting of the Indo-US sub-commission on science and technology. About 200 delegates from both countries held discussions in six working groups on health, medical and life sciences, physical sciences, atmospheric earth and marine sciences, energy, environment and ecology during the meeting, the seventh in a series.

Separate administration for domestic airports: Construction, maintenance and management of domestic airports will be entrusted a separate administration under the Ministry of Civil Aviation; it will be on the lines of the International Airports Authority of India, (IAAI) which is in charge of the airports in Delhi, Bombay, Madras and Calcutta. The Civil Aviation Department is also contemplating steps to relieve the congestion at international airports and other airports may be brought under the purview of IAAI, according to Union Civil Aviation Minister, Ashok Gehlot.

The Bharat Heavy Electricals Limited (BHEL) has joined a select band of four top equipment manufacturing companies in the world in developing a new ignition system to reduce fuel oil consumption in coal-based thermal power plants. Its introduction is expected

to save Rs 400 crores annually. Additionally, BHEL is introducing the latest technology for gas turbine, high voltage direct current transmission system and gas booster system. Research and development expenditure of Rs 39 crores or 2.2% of the turnover, has been planned for 1985-86. BHEL's new areas of expansion include high voltage direct current transmission equipment, variable frequency controls, micro-processor-based controls and electronic automation for steam turbines among others.

University in Mechanical/Chemical/Metallurgical/Industrial Engineering and are 30 as on Jun 1, 1985, you may try your luck with the company. If you prove your worth during the one-year training period (when you will be given a consolidated stipend of Rs 1,648), you can rest assured that you will be absorbed as Executive with attractive emoluments.

For application format and other details, please look up *Employment News* of May 4. Hurry! The completed forms should reach the Personnel Offices (Recruitment), BALCO, 'Punj House', 18, Nehru Place, New Delhi-110 019, within 30 days of the publication of the ad, i.e., by Jun 4.

Happy Sailing!

Life can be smooth sailing with a career in the Indian Navy provided adventure and challenge are your forte. All you have to do is to take a permanent commission in the "three dimensional" Indian Navy General Service and Naval Aviation (Executive Branch). The monetary benefits are high, not to talk of the generous leave, leave travel concessions, etc.

The challenge is open to bachelors born between Jul 2, 1964 and Jul 1, 1967, who hold a graduate degree from a recognised university. But they have to appear in the Combined Defence Services Exam to be held by the UPSC on Oct 27, 1985. Application forms are available with the Secretary, UPSC, Dholpur House, Shahjahan Road, New Delhi-110 001 on payment of Rs 2 by cash/m.o./crossed IPO. For more details please see *Employment News* of May 4. Last date for submitting completed forms is Jun 24, 1985.

to education with stress on vocationalisation; eliminate exploitation in land transfer, agricultural tenancy, debt bondage and money lending; provide adequate infrastructure for welfare programmes; improve the quality of tribal environment and upgrade resources. According to the 1981 census, there are about 5.38m tribals in the country, representing 7.5% of the total population.

New NFDC-MPEAA agreement: The National Film Development Corporation (NFDC) and the Motion Pictures Export Association of America (MPEAA) have signed an agreement which will fetch an annual capitalisation fee of Rs 26.50 lakhs on American films imported to India. The new agreement, signed in New Delhi on Apr 1, is for annual import of 70 to 100 American films produced by the 10 members of the MPEAA. The last agreement expired in September 1983 and was renewed for varying periods upto January end. The new agreement takes effect retrospectively from Feb 1.

Ban on fresh appointment continues: The government has not lifted a ban imposed on fresh appointments to government posts; the ban was due to expire on Mar 31. First imposed in January 1984 as a measure of economy for nine months, it was extended for another six months. Special permission is required from the Finance Ministry if an appointment is to be made under "exceptional" circumstances.

EVENTS—International

Transfer of Hong Kong ratified: China National People's Congress, on Apr 10, ratified the agreement on the return of Britain's crown colony of Hong Kong to China to set up a commission to draft basic legislation for Hong Kong's planned self-administration and Chinese sovereignty, with the assistance of representatives of Hong Kong's more than 5 residents. Chinese Communist Party leader Li Yaobang assured Hong Kong journalists in Beijing that China would strictly adhere to the agreement and not interfere with the capital system of Hong Kong for 50 years.

A 13-day session of Sino-Soviet normalisation talks ended in Beijing on Apr 22. A joint statement issued at the end of the talks

(Continued on page 6)

SPORTS

Cricket

In the Golden Jubilee Year of the National Championship—the **Ranji Trophy**—the final which ended on Apr 6 at Wankhede Stadium in Bombay was just the kind of match which enriches this game of "glorious uncertainties". Delhi had the first innings lead over Bombay, which would have given the trophy to them in case of a draw. This result could easily have been achieved, but for their immature batting and some superb bowling by Ravi Shastri. The Delhi squad must have rued the absence of Mohinder Amarnath, their captain last year, who has since moved to join Baroda in the National Championship.

The entire Delhi innings crashed on the final day, with 12 minutes to go for tea interval. That left Bombay with a 90-run win, and proud holders of the trophy for an unprecedented 30th time.

Scores: **Bombay** 333 all-out and 364 for 7 declared. **Delhi** 398 all-out. (Shastri 8 for 91)

This was the fourth final between these two teams, and Delhi have won only once—in 1979-80 under Bishen Singh Bedi.

THE OLYMPIC ORDER

Primo Nebiolo (Italy), the President of the International Amateur Athletics Federation (IAAF) was decorated with the insignia of the Olympic Order, by the International Olympic Committee (IOC) President, Juan Antonio Samaranch (Spain), on Mar 30. This is the highest IOC award. The ceremony took place in the honour room of the Foro Italico Sports Complex in Rome.

Tennis

The \$380,000 **Fila Trophy** indoor tournament at the Stadio Sports Palace in Milan (Italy) was won by John McEnroe (USA) with a 6-4, 6-1 victory over Anders Jarryd (Sweden) in the final on Mar 31. Earlier, in the second round, Jarryd had beaten the Indian ace Vijay Amritraj 6-3, 6-4.

The \$110,000 Asian Nations Championship for the **Ghaffar Cup** ended at Kuala Lumpur on Apr 5 with victory for South Korea, over Indonesia by three matches to nil.

The European leg of the grand prix outdoor tournaments circuit began on the famous clay courts of the Monte Carlo Open, which ended on Apr 7. This tournament was won by the clay court exponent Ivan Lendl (Czechoslovakia) when he beat Mats Wilander (Sweden) 6-1, 6-3, 4-6, 6-4 in the final.

McEnroe won the \$315,000 Chicago Classic Grand Prix tournament on Apr 7, as Jimmy Connors (USA) suffering from severe back pain defaulted the final.

While at Palm Beach Gardens (Florida) the \$275,000 **'Ford' Challenge Cup** for women was won by Chris Evert Lloyd (USA) when she defeated Hana Mandlikova (Czechoslovakia) 6-3, 6-3.

The \$500,000 'Buck' sponsored WCT finals ended in Dallas (Texas) on Apr 14, in victory for Lendl. In an error-filled final he disposed of the young American Tim Mayotte

with a score-line of 7-6, 6-4, 6-1; for his second WCT finals title. Mayotte, who had earlier defeated Andrez Gomez of Ecuador, Mats Wilander and Joakim Nyström both of Sweden, to reach the last stage.

FIGHT OF THE DECADE

In what was dubbed as the 'Fight of the Decade', on Apr 14, 'Marvellous' Marvin Hagler retained his undisputed (i.e., both WBA and WBC recognised) world middleweight title, when he stopped fellow-American Thomas 'Hitman' Hearns in the third round of a scheduled 12-round bout at Las Vegas.

Chris Evert defeated 14-year-old Argentine Gabriela Sabatini 6-4, 6-0 to retain her title at the \$200,000 Family Circle Magazine Cup Tournament at Hilton Head Island (South Carolina), on Apr 14. Gariella is expected to be a force to reckon with, as she knocked out three of the top 10—Zina Garrison (USA), Pam Shriver (USA) and Manuela Maleeva (Bulgaria)—in the world on her way to the final.

Table Tennis

The 38th World Championships were held at Gothenburg in Sweden. Once again, the Chinese totally dominated the scene. In the last three world championships, the Chinese have won 19 out of the 21 titles available—all seven at Novisad in 1981, and six titles each at Tokyo (1983) and Gothenburg (1985).

Results: Team: Men: China b Sweden 5-0. **Women:** China b North Korea 3-0.

Individual titles: Men's singles: Jiang Jialiang (Chn) b Chen Long Can (Chn) 21-14, 23-21, 21-18. **Doubles:** Michael Appelgren & Ulf Carlsson (Sweden) b Milan Orlovski & Jindrich Pansky (Czechoslovakia) 21-15, 23-21.

Women's singles: Cao Yan, Hua (Chn) b Geng Li-Yuan (Chn) 21-12, 21-16, 10-21, 21-16. **Doubles:** Geng Li-Yuan & Dai Lili (Chn) b Cao Yan Hua & Ni Xialian (Chn) 21-8, 21-17. **Mixed doubles:** Cao Yan Hua & Cai Zhen Hua (Chn) b Marie Hrachova & Jindrich Pansky (Czechoslovakia) 9-21, 21-12, 21-8.

JUST REDS & BLACKS

The next TT World Championships will be held at New Delhi in 1987—as announced by the International Table Tennis Federation's re-elected President Roy Evans. He also said that under a new ruling reached by the ITTF Congress, **the colour of TT bats will be red and black only.**

Squash

World champion Jehangir Khan of Pakistan, won the British Open for the fourth time. In the final at Wembley, London on Apr 23, he demolished the Australian Chris Dittmar 9-2, 9-3, 9-5.

The women's title was retained by Susan Devoy of New Zealand, as she downed Martine Le Moignan of Guernsey, Channel Islands.

Khan, in fact, has remained unbeaten since the British Open final of 1981, when he lost to Geoff Hunt of Australia.

Weightlifting

The 37th National Championships were held

at the Khudiram Anusilan Kendra in Calcutta from Mar 20-24, in which the Services emerged winners claiming the **Burdwan Shield** for the team championship, scoring 419 points. This was the eighth title for them.

Results: 52 kg-class: K. Mahendran (Ser); **56 kg:** Parvesh Chander (Rly); **60 kg:** G. Davan (Rly); **67.5 kg:** Jagmohan Sapra (Rly); **75.0 kg:** Harnek Singh (Pun); **82.5 kg:** Daler Singh (Ser); **90.0 kg:** Maher Chand (Ser); **100.0 kg:** Tara Singh (Rly); **110.0 kg:** Neville Daroga (Rly); **Over 110.0 kg:** Balwinder Singh (Rly). ***National Record**

Jagmohan Sapra was adjudged the Best Lifter of the Meet.

WHAT'S IN A GOAL

Not many goals scored in football can compare with what happened in the Bavarian league match at Bamberg (West Germany) on Apr 16, between F.D. Bamberg and S.S.V. Jahn Regensburg. The S.S.V.J.R. Player Baumgartner upon being brought in as a substitute took a pass from a team-mate and headed full speed down the field. He then hammered the ball into the net and raised his arms in jubilation. And only when he turned to see the crestfallen faces of his team-mates, did he realise that it was his own goal, handing a 1-0 victory to Bamberg.

The 17th Asian Championships ended in Hang Hou (China) on Apr 18, with China emerging on top, as was expected. They amassed 10 gold, 11 silver and three bronze medals (medals were awarded for both types of lifts—snatch and clean and jerk, and also for the total of both, for each weight-class).

In second spot was South Korea (six golds, four silvers and eight bronze). India could only manage the seventh position, with four bronze medals, in the 12-nation competition.

South Korean Lee Min Woo carried away all the three golds in the over-110 kg class. He raised 170 kg in the snatch, then jerked 210 kg, to total 380 kg—becoming the **Strongest Man in Asia.**

Marathon Timings

The International Amateur Athletics Federation (IAAF) held its inaugural **World Cup Marathon** at Hiroshima in Japan. The women's race on Apr 13 was won by pre-race favourite Katrin Dörre of East Germany in 2:33:30 sec. It was the 23-year-old's sixth win in seven races since 1982. She produced a powerful burst in the closing stages to win from 33-year-old Zoia Ivanova of the Soviet Union, who clocked 2:34:17 sec.

Italy won the team championship; the Soviet Union and East Germany were second and third respectively. A total of 111 runners from 37 nations participated.

In the men's race on Apr 14, over the **26 miles and 385 yards course (42.195 km)** rank outsider Salah Ahmed of Djibouti staved off a challenge from Japan's Takeyuki Nakayama to win in 2:08:09 sec, just six seconds ahead. **These were the second and third fastest marathons in history.** Ahmed, who came 20th at the Los Angeles Olympics in

thing should be a better battle last 7 km, and it was only in the last 500 m that victory was assured.

Djibouti won the team title. Japan and Ethiopia were second and third respectively.

India finished 36th among the 41 positioned countries.

At about the same time as the World Cup, three other popular city marathons also took place and produced some startling results:

The 89th Boston Marathon was won by defending champion Geoff Smith of Great Britain, who defeated his nearest rival by more than five minutes! He finished the race in 2:14:5.

Among the women, Lisa Larsen Weidenbach (USA) won by more than eight minutes in 2:34:06.

Greek athlete Yiannis Kourous won the gruelling 960-km "westfield" Sydney-to-Melbourne ultra-marathon which is billed as the world's longest foot race. Kourous, a 28-year-old sports

more than half pulled out, including two former winners.

At the Rotterdam Marathon, on Apr 20, the Olympic Champion and three-time world cross-country champion, Carlos Lopes of Portugal added yet another feather to his cap when he won in a world best time and became the first to clock less than 2 hours 8 minutes. The 38-year-old Portuguese set a blistering pace throughout to clock 2:07:11 sec to break the old record of 2:08:05 set by Steve Jones at Chicago in October last.

On Apr 21, Jones (Wales) himself participated in the 5th London Marathon and in an attempt to regain the record, he did manage to win, clocking 2:08:16, which was the best recorded in Britain.

In the women's section, 29-year-old Norwegian Ingrid Kristiansen did set a new world best time of 2:21:06, beating the old mark of 2:22:43 set by Joan Benoit (USA) at Boston in 1983.

SANJEEV GUPTA

WIMBLEDON THE MECCA OF LAWN TENNIS

Wimbledon is the premier tennis championship of the world and starts each year six weeks before the first Monday of August. It is the oldest tennis tournament and the competition lasts a fortnight. This year it will be staged from Jun 24 to Jul 7.

Love All

The Wimbledon tennis tournament is run by the All England Club. This unique club started in 1868 as the All England Croquet Club with its courts situated off Worple Road, Wimbledon. In 1873, a Major (ret'd) Walter Wingfield patented a form of tennis under the curious name of Greek origin, "Sphairistike". Commercially inclined, Major Wingfield sold the game to various parties on the pretext that it was a rackets and ball game played in ancient Greece. In 1875 the All England Croquet Club set aside part of their lush turf at Worple Road, Wimbledon for tennis activities.

The parent body of the now All England Croquet and Lawn Tennis Club was the Marylebone Cricket Club (MCC) which, looked after both cricket and tennis. In early 1877, the All England Club adopted the rules of lawn tennis as published by MCC and unanimously agreed that the world's first lawn tennis tournament should be launched at Wimbledon with all speed. This bold spring meeting decision led to the commencement of the inaugural lawn tennis championship from Jul 9, 1877 which, over the years has become the greatest tennis show on earth now known simply as WIMBLEDON. It is the championship which every tennis male or female player wants to win.

The inaugural Wimbledon championship had only one event—the men's singles. In all 22 players participated and S.W. Gore (UK) became the first Wimbledon champion. The popularity of Wimbledon made the organisers introduce the women's singles event in 1884.

The turn of the present century witnessed a

rapid boost in Wimbledon's popularity and the tournament became truly international. May Sutton of the US in 1905 became the first overseas competitor to win a Wimbledon title. Norman Brookes of Australia became the first overseas men's champion in 1907. By the time World War I (1914-1918) came Wimbledon was well established and crowds increased every year. Soon it was realised that the Worple Road ground was inadequate to cater to the surging crowds. The present site on Church Road was commissioned in 1922 after the war. Such is the popularity of Wimbledon that the allocation of tickets by ballot has been in vogue for many decades.

The prestigious men's singles title has been won by representatives from Australia, Czechoslovakia, France, Great Britain, New Zealand, Spain, Sweden, and the US. The singles title has been claimed most times (seven) by William Renshaw (Britain). However, the best record of all time is that of the mercurial Swede Bjorn Borg, who won Wimbledon five years in a row from 1976 to 1980. Fred Perry (Britain) has won Wimbledon thrice in a row from 1933-1936. At present John McEnroe, winner in 1983 and 1984, has a chance to win the coveted men's singles crown thrice in a row. The famous Australian left hander Rod Laver emerged victorious on four occasions, twice as an amateur (1961 and 1962) and twice as a professional (1968 and 1969). Gore became the oldest champion in the history of Wimbledon when he won the men's singles title for the third time in 1909 at the age of 41.

The longest-ever match was played over two days, a first round singles encounter between Americans, Pancho Gonzales and Charlie Pasarell in 1969. The match lasted 5 hours and 20 minutes. Gonzales emerged victorious with the score reading 22-24, 1-6, 16-14, 6-3 and 11-9, in a match going to 112 games.

Competitors from Australia, Brazil, Britain, France, Germany and the US have claimed the women's singles title. The most successful winners have been Helen Wills Moody (USA)—eight times, Susan Langley (France) and Billie Jean King—six times each. Martina Navratilova (formerly of Czechoslovakia, now a citizen of US) has won Wimbledon five times already (1978, 1979 and thrice in a row from 1982-84) and may well become the greatest woman player of all time.

Borg and McEnroe: The gladiators in the Wimbledon arena.

In terms of audience response on television, Wimbledon ranks third in the world, narrowly behind the Olympics and the World Cup football tournament. However, Wimbledon is held annually unlike the other two events held after every four years. Again, Wimbledon has no government backing like the Olympics or World Cup. It is run exclusively by the All England Tennis and Croquet Club with a very select membership. There are exactly 325 male members and 75 women, excluding the champions who become honorary members. Each year 9 members are elected on an annual basis.

The Championship Fortnight
Wimbledon is more than tennis. It is a complex composed of 15 grass courts, 10 hard courts, a bank, a police station, a post-office, a wine cellar and 15 restaurants open only during the championship fortnight. It is basically an undelimited spint. The courts are surrounded by flowers which emit aromatic whiffs. Annually 1,500 hydrangeas, 1,000 geraniums, 1,000 petunias, 500 French marigolds and 36 abutilon lilies are planted. On distant walls and trellises there is a cluster of panoramic roses. Yet Wimbledon does not have just a garden party atmosphere. They have a professional management which has revolutionised tennis.

In 1968, Wimbledon, defied the hypocritical attitudes of the world tennis body and the tournament was opened to professionals and amateurs. This revolutionised tennis. Discrimination ceased and players ceased to be professionals or amateurs, just tennis players, professional in attitude. Money poured into the game, as more tournaments got sponsored and more players took to the game.

participate in the tournament. The fortnight of tennis attracts a crowd of about 3,50,000 spectators. Wimbledon has assets of more than five million British pounds. On the stock market, shares in Wimbledon are fetching a staggering 8,000-9,000 British pounds. Exactly 128 men and 64 women annually vie for the men's and women's singles title. The winners of the men's and women's singles receive \$74,167 and \$66,750 respectively.

The Indian Round

India's performance at Wimbledon has been tentative. India started participating here since the 1930s. Only Ghouse Mohammed (quarter-finals), Ramanathan Krishnan (twice semi-finalist, 1960 and 1961, losing to ultimate winner Neale Fraser and Rod Laver on both occasions) and Vijay Amritraj (twice quarter-

finalist for India. Otherwise, Indian participants have been eliminated in the early rounds.

To improve tennis in India, Vijay along with sponsorship from Britannia Industries Ltd, an associate of NABISCO, has set up a tennis academy in Madras. Eight players (under 12 years) have been selected on the basis of their talent, mental attitude, potential and aggressiveness. Sponsorship to the tune of Rs 40 lakhs has been obtained.

NABISCO are to donate equipment for the players who will receive intensive training from a foreign coach for five years. Education, diet, pocket money and travel allowances will be met by the tennis academy. In this way Vijay hopes to nurture young tennis talent in India who will soon make their mark at Wimbledon.

NOVY KAPADIA

revived Games minus the defeated countries. The Belgium metropolis saw the introduction of the Olympic flag and Olympic oath. The 1920 Olympics are also remembered for the achievements of the great Finnish runner Paavo Nurmi.

Olympics returned to Paris in 1924 with 5,533 competitors from 44 nations. Nurmi continued to reign supreme despite the successes of Johnny Weismuller in swimming and of British rivals Eric Liddel and Harold Abrahams in the sprints. 1928 in Amsterdam heralded India's spectacular debut in Olympic hockey. Berlin in 1936 provided Hitler with a magnificent opportunity to use the Olympics for Nazi propaganda. The superb organisation included the first-ever Olympic torch ceremony. Honours went, however, to American Jesse Owens for his phenomenal performance in the sprints and the long jump through which he collected four golds. From the Asian point of view Berlin marked the consolidation of Indian hockey superiority as well as Japan's terrific success in athletics and, in particular, in the marathon.

World War II again prevented the Olympics from being held until in 1948 when London staged a low-key, low-budget effort, and succeeded in getting 4,106 competitors from 59 countries at the Wembley stadium. Fanny Blankers-Koen, a Dutch housewife, was the outstanding success of the Games. These were the Olympics which also witnessed the first-ever Indian and Pakistani hockey teams after partition. Henry Rebell, the triple jumper from Madras was a leading qualifier in his event, but failed to record a jump in the final on account of a muscle injury.

The Olympics gained momentum in 1952 when Helsinki saw the return of the Soviet Union to the fold after 40 years. Emil Zatopek, the Czech distance runner, was the sensation of the Olympics when he won the 5,000 and 10,000 m as well as the marathon with wife Dana winning the javelin. K.D. Jadav became India's first-ever medallist in wrestling when he finished third in the bantamweight section. Lavy Pinto in the 100 m and Sohan Singh in the 800 m reached the semi-finals.

The Olympics came to the Southern Hemisphere for the first time in 1956 at Melbourne. The Australians took full advantage of the season and home support to record their best-ever success in swimming.

1960 saw the Ethiopian Abebe Bikila run barefoot to win the marathon. It was the Olympics which saw India's Milkha Singh narrowly miss a medal in the 400 m final, when he finished fourth in a fastest ever Asian best of 46.73 sec. The Indian hockey team lost the final for the first time in Olympic history, but regained the title four years later in Tokyo.

The 1964 Olympics are known for the performance of two outstanding swimmers, Don Schollander (USA) and Dawn Fraser (Australia). Tokyo also provided the first-ever Indian finalist in the men's 110 m hurdles, where Gurbachan Singh Randhawa finished fifth in 14.09 sec. The controversial high altitude Games at Mexico City in 1968 are best known for the spectacular showing of the African athletes, quite apart from Bob Beamon's world record breaking leap of 8.90 m in the long jump. And Mexico City saw India move down to third place in Olympic hockey.

The 1972 Olympics in Munich were to mark the grand sporting revival of the Federal Republic of Germany. With regard to organisation it was near perfect. But it turned out to be the most tragic of Olympics on account of a terrorist shoot-out in which 11 members of the Israeli contingent lost their lives. Montreal in 1976 was beset not only by a financial crisis but also by the last-minute boycott by the African member nations. For once India did not figure among the hockey medallists. Sriram Singh made history by becoming the first Asian to reach the final of the 800 m where he finished seventh in 1:45.77.

Moscow in 1980 provided yet another version of a boycotted Olympics this time at the insistence of American President Jimmy Carter. With the withdrawal of leading rivals, India had little difficulty winning the hockey title, which was surrendered at Los Angeles in 1984. The last Games marked, from the Indian viewpoint, a long leap forward by women athletes. P.T. Usha was the nation's leading performer and finished fourth in the 400 m hurdles, and later joined M.D. Valsamma, Vandana Rao and Shiny Abraham to reach the finals of the 4x400 m relay where they finished seventh.

By the end of 1984 it was clear enough that having survived three boycotts, the Olympics would continue to go from strength to strength, since the overall standard in most countries appeared to be showing a steady improvement in almost every sport. The next flame in Seoul in 1988 may, therefore, be bigger and grander with even more outstanding personalities than those at Los Angeles. With the Olympic Committee and the International Federations showing greater realism and flexibility, it is becoming possible for the elite sports people to prolong their 'active' career without financial worries. Thus Carl Lewis and his friends don't face the insecurity that had confronted the likes of Jesse Owens. The future of the Olympic movement is fairly rosy, and it thus becomes more important than ever for India to take it more seriously and produce world class performers.

RANJIT BHATIA

OLYMPICS

THE FLAME BURNS ON

The Olympics are much more than the world's greatest spectacle of sport. They provide a rather bizarre testing ground for varying economic, political and social systems. What began as French nobleman Baron De Coubertin's dream to revive the games of the ancient Greeks, has grown into the most vital forum for international sporting supremacy. Understandably then the Olympic movement has faced an increasing number of problems of the kind that have invariably challenged the very survival of these Games. Growing Olympian ambitions have, however, enabled the movement to survive, and despite interventions such as the massacre of Israeli athletes in Munich in 1972 and the boycotts of 1976, 1980 and 1984, the Games have thrived and become more spectacular each succeeding four years.

The first of these modern Olympics were held in 1896 in Athens. Two hundred and sixty competitors and officials from 12 countries pioneered Olympic participation. An 80,000-strong crowd watched the US dominate athletics and the Germans gymnastics. Spirdon Louis was the host nation's only winner in the marathon, while Calcutta-based Norman Pritchard representing India, won a silver for the 200 m. St Louis (USA) in 1904 hosted the next Olympics as a side-show to the World Fair with very thin attendance at various events, quite apart from the fact that only eight countries outside North America were able to participate in it. The IV Games held in London's White City stadium are historic for their association with the first of the 26 mile 385 yards marathon which is today the official distance for the race. The distance was fixed, oddly enough, to enable the runners to proceed from Windsor Castle to Shepherds Bush in London and run the last 385 yards so as to finish before the Royal Box at the stadium. These were the Games with as many as 20 events and where the US-Great Britain rivalry was probably at its closest and bitterest. In 1912 Stockholm provided an excellent blend of sports and the arts with the instituting of a cultural festival along with the sports events. World War I brought to a halt any further meetings until 1928 when Antwerp was the venue of the

PERSONALITY DEVELOPMENT

WRITING A RESUME-2

A mismatched job is a curse. It runs the risk of both the employer and the employee constantly being at loggerheads. A well-developed resumé, containing the job seeker's relevant work experience related to the particular post he is seeking, should help reduce this grave risk. Hence, each detail of the process of resumé-writing should be attended to with meticulous care. This would also prove to be an additional guard against the stumbling blocks of the screening process.

The following set of sample resúmes—both biographical and functional (*CCTimes*, May '85)—should prove helpful to prospective job-seekers.

Biographical resúmes

I. Post applied for

Chief Engineer (Public Sector undertaking) Director
Regional Engineering College/Dept. Head of Research organisation.

1. Name
2. Date of birth
3. Citizenship
4. Qualifications
5. Experience

M.Tech, IIT, Kharagpur

(a) About 25 years teaching experience in Mechanical Engineering Design; Prototype development; Import-substitution; Teaching and research at university level; Curriculum development; Laboratory development; Workshop planning and development; Planning and supervision of students' practical training in industries.

(b) Carried out several R&D projects, guided thesis and published research papers.

6. Employment History:

Senior Teaching Fellowship (Technical Teachers' Training Scheme) Govt. Of India
Lecturer, Mechanical Engineering, IIT, Delhi
Asst Professor, Mechanical Engineering, IIT, Delhi

7. Titles of Reports, Thesis and Papers published:

(i) Practical Training in Hindustan Aircraft Ltd—a

report submitted for B.E. degree requirements, 1959.

- (ii) 'Effect of Tooth Form on Beam Strength of Spur Gear', M.Tech. Thesis, IIT Kharagpur, 1961.
- (iii) 'Mechanical Components in Automatic Control Measurements' *The Designer*, Vol 8, Annual number, 1962.

II. Post applied for

Name
Age
Address
Education

Sales Manager

B.Com, Delhi University.
Diploma in Marketing Management, Institute of Marketing Management, Sujana Singh Park New Delhi.
Sales boy, departmental store. Worked as sales representative on commission basis during 1982 summer vacations.
Worked as sales assistant in a popular clothing store, Delhi from 1983-1984.
Assured increased responsibility during employment. Assisted in window displays, preparation of inventory and placement of orders. Assisted in preparing ad copy for popularising the store. Handled correspondence, maintained records.

Functional resumé

I. Post applied for

Name
Age
Address
Education

Administrative-cum-Personnel officer.

M.A. Psychology, University of Bombay.
Diploma in Personnel Management.

Administrative and Management Skills:

- Supervised staff, budgets and facilities in business and non-profit organisations
- Directed programmes for university placement office, planned workshops, coordinated public relations and evaluated effectiveness
- Attentive listener, able to help people to "think out loud", reflect on experiences, identify problems and develop solutions.
- Seasoned interviewer, developed skills as stringer for newspaper

Work experience:

Assistant Manager For Inventories, Meat Wholesale Company (Mention place and dates). Enjoyed industrial side of management by assisting in maintenance of inventories, processing of orders and directing transportation strategies.

P.G.

CONTENT EVENTS : NATIONAL (Continued from page 22)

vious financial year. And then in the four weeks ending April 13, 1985, the wholesale price index moved up by 2.3%. However, according to government sources, prices of only some commodities have gone up while those of others have moved down. The justification offered by the Centre, for the post-budgetary inflationary trends is that a conscious decision had been made to impose certain levies to raise resources for meeting the development needs of the country's economy. The impact of levies had, however, been compounded by the simultaneous increase in revenue collection efforts of state governments. But this still does not explain the fact that the subsequent price rise was disproportionate to budget estimates.

The price rise in certain urban areas has been to the tune of 15%, while that in far-flung rural areas has been much steeper—between a staggering 30-50%. This clearly reveals that the budget has affected the lower rungs of society the most. On the other hand, prices of industrial inputs ranged between 40% and 10% higher than the statutory prices in case of steel and cement. But this at least can be explained away in terms of the increase in their administrative prices. In case of the disproportionate rise in prices compared to the levies imposed, obviously an artificial scarcity is being created through hoarding and black marketing. Perhaps the only feasible solution lies in the elimination of middlemen and strengthening of the public distribution system and a significant increase in production.

POWER GENERATION HIGHS AND LOWS

The situation on the country's power generation front seems to be fluctuating. While there was an impressive growth in power generation in 1984-85 from 5.7% in 1982-83, 7.6% in 1983-84 to 12% in 1984-85 the power shortage in the country continued to be acute. In fact the overall power deficit in the country increased to 11% from 10.8% in 1983-84 and 9.2% in 1982-83 and almost all regions showed deficit power supplies with a significant increase in deficits in the northern, eastern and north-eastern regions. In Haryana, Karnataka, Tamil Nadu, Rajasthan, Jammu and Kashmir, UP, West

As regards the growth, however, the growth of output in 1984-85 was supported by a sizeable increase in both thermal as well as hydel generation. Favourable rains gave a considerable boost to the latter in Karnataka, Tamil Nadu, Andhra Pradesh, Punjab, and the north-eastern region. In the Bhakra-Beas area, J & K, Himachl Pradesh, Gujarat, Orissa and Maharashtra hydel generation registered a decline. There was an impressive growth in thermal power output, too, owing to increased supplies of coal which facilitated an improvement in capacity utilisation of thermal plants. This was reflected in the Plant Load Factor (PLF) averaging 50.1% in 1984-85 against 47.9% in 1983-84. But even so capacity utilisation is far below the average norm of 58%. Also there was a glaring lag in investment and project implementation on the power front which was reflected by inadequate addition to new capacity. The aggregate new capacity was 30.5% less than the capacity added in 1983-84 and 28.4% short of the year's target.

Total power generation—thermal, nuclear and hydel—increased by 12% while the gross generating capacity rose by 7.8% compared to the preceding year. The bulk of this increase in capacity came from thermal power which spurted by a record 14.1%. With regard to generation for 1984-85 hydel power output increased by 7.9%. This improvement was supported by a marked increase in output in the southern region by 25.6%. As such the southern region accounts for 46% of total hydel power generation in the country. The northern region, which accounts for 34.2% of total hydel power registered a decline of 4%. The western region, accounting for 12.6% of total hydel power generation also registered a decline of 9.7% while in sharp contrast the eastern region, which accounts for 5.7% of the country's hydel power, registered a spurt of 65.3%. The north-eastern region also registered an increase of 56.3%. The nuclear power which accounts for a meagre 2.7% of total power generation in the country registered an increase of 16.4%.

Despite this growth in various sectors of power generation there was a lingering power deficit, too, in the country owing to a spurt in power requirement of 16.9%. Quite expectedly this has had an adverse effect on the industry. Karnataka is the only state which recorded a surplus of 11.8%, while in MP, Andhra Pradesh and Kerala and the Union territories of Delhi and Chandigarh no surplus or shortage was registered because supply matched the requirement.

JYOTSNA SHARMA

NEWS CAPSULE

(Continued from page 55)

said the meeting was "calm, businesslike and useful" and both sides will convene the seventh round of talks in Beijing next October. China's special envoy to the talks, meanwhile, admitted that the latest talks failed to substantially advance the normalisation process. China frequently mentions three obstacles to improvement of relations: the estimated 6,00,000 Soviet troops on China's borders, Moscow's intervention in Afghanistan and support for Vietnamese occupation of Kampuchea.

Reagan rebuffed by House of Representatives: The US House of Representatives on Apr 23 rejected by 248 votes to 180 President Ronald Reagan's proposal for 14m in aid to contra insurgents seeking to overthrow the leftist government of Nicaragua. The same resolution was approved by the Senate 53-46 only a few hours earlier. Combined, the two votes set up a continuing congressional debate on whether to allow Reagan to provide non-lethal assistance to the rebels.

Bandung conference of Non-aligned: Representatives of 80 Non-aligned nations ended a two-day conference in Bandung, Indonesia, on Apr 25, by issuing a wide-ranging declaration calling for closer cooperation and a revised world economic order. The conference, which was held to commemorate the 30th anniversary of the Bandung meet, called on industrialised nations to remove protectionist barriers, demanding a just distribution

of property and urged immediate emergency aid for the least developed nations. It also appealed to all nuclear powers to reduce arms immediately and condemned South Africa and Israel. But the conference was less specific in addressing conflicts in South-East Asia, Central America and the gulf, merely calling on nations in conflict to work towards speedy, just and peaceful solutions in accordance with NAM's objectives and the UN charter. The two-day session commemorated the meeting in 1955 by 29 nations which led to the creation of NAM.

Warsaw Pact extended: Leaders of the Soviet bloc, on Apr 26, signed an agreement extending the validity of the 30-year-old Warsaw Pact. The agreement was reached after a formal summit meeting that convened in the same 18th century palace in Warsaw where the treaty was first ratified. Signatories to the agreement were: Bulgaria, Hungary, East Germany, Poland, Romania, the Soviet Union, and Czechoslovakia.

MISCELLANY

The bullock-cart still constitutes two-thirds of rural transport, according to a survey conducted by the Indian Institute of Management (IIM), Bangalore. The survey, funded by the Ministry of Shipping and Transport, reveals that of the 15m bullock carts in the country, 12m are rural-based. Less than 10% of the carts were modernised during the last two years the survey said.

National plan to combat killer cyclones:

A high-level committee has recommended the formulation of a national plan to combat more effectively the recurring killer cyclones; the committee, headed by Prof A.K. Saha, has also suggested the setting up of an apex body to constantly study all aspects of cyclones. On the basis of cyclones recorded during the last 100 years, the committee has identified 14 coastal districts in Andhra Pradesh, Orissa, Tamil Nadu, and West Bengal as highly cyclone-prone. It called for strengthening of standard ground observations from ground meteorological and ship observatories.

DIED

Basil Bunting, 85, considered by some critics to be among the greatest English poets of the century and once described as "spectacularly undervalued", on Apr 17, in Hexham, Northern England. In the 1920s, Bunting was part of the literary circle of authors who included Ernest Hemingway, and later moved to Italy where he befriended Ezra Pound and W.B. Yeats.

Tancredo Neves, 75, Brazil's President-elect who was thwarted from becoming the country's first civilian leader in 21 years by illness, on Apr 21, after undergoing seven operations since Mar 14. Neves, a centrist politician whose career spanned a half-century, was chosen by the electoral college in January to be the first civilian President since 1864.

A.P.

PROFILE OF A WOMAN ENTREPRENEUR

BY JYOTSANA KAPOOR



Prabha Chopra—winner of the 1985 IMM. CINNIFAN Gold Award for the best woman entrepreneur—is a classic example of what hard work, alertness and will-power can achieve for a person. As Executive Director, Didi Modes Pvt Ltd. Prabha is a business woman par excellence. Beginning modestly with the help of 18 tailors working in her own house, in 1973, she had about 1,800 people working for her in 1978; and has now about 700 workers working directly or indirectly for her garment industry. "When I went into the manufacturing line, I had no idea about the quality or even the proper measurement of garments. There was no one to guide me; I would just wear a dress and see how it looked on me. To arrange for the first tailor to cut the design according to my instructions was very difficult. So I just picked up people and trained them. Gradually the trade picked up," Prabha recalls.

Prabha was married way back in 1961 and felt "very restless" sitting at home. "It was my father-in-law who inspired me to learn shorthand and typing and help him in the joint family business of exporting handicrafts and various other items. Later I started designing and painting sarees at home and selling them in exhibitions" she explains.

Soon Prabha started learning the necessary managerial skills. This, combined with her will to succeed, set her company on the road to success. By 1978, Didi Modes came to occupy a position among the ten top garment exporting companies in the country. "One of the main reasons for my success could be my creativity," Prabha claims, "I was the one to develop 'ombre' dyeing (garments dyed in 3 or 4 different shades). I also discovered 'piece' dyeing, to give the garment a rustic look.

She also used fishnet (a development of handloom sector) for her garments. In 1976, she developed 60' crepe (a special textured handloom yarn) and in 1983, she introduced 'ragknit' sweaters in the market. These sweaters had a 'beggar' look—with the knots hanging out.

Wanting to turn her industry from a cottage industry into a large-scale industry, Prabha, in 1976, hired technical help from Belgium, Germany and Japan and set up a highly mechanised unit in Faridabad. But the labour let her down and she had to close down the unit after three years. Prabha lost heavily; but her fighting spirit sustained her and she was soon back in business. "In this kind of business if one makes a lot of money, one has got to face landslides too," warns Prabha. "It is highly competitive and survival is very important. Power failure or sudden shortage of fabrics can throw the entire schedule out of gear."

Bad labour, wrong buyers who do not pay or who do not pick up merchandise and discrepancies in letters of credit, are some of the major stumbling blocks. Sometimes an exporter's collection is not up to the mark and the market is lost. Then these goods have to be sold in the local market at very low rates. "The factors that augment the garment export business are timely delivery, good quality, right price and new designs," Prabha points out.

According to Prabha, export of garments is a highly personalised job. "We have to keep a year ahead of the coming fashion. I usually travel a lot and visit fashion houses, boutiques and read a lot of books by famous fashion designers. Once the samples are ready and the buyers make the selection, we go into production at once," she says. One of her companies is now a buying agency, through which small exporters are promoted. "We pass on the orders to them and they export the goods on their own, though we give them the designs and keep strict control over quality," she says.

Talking about the problems faced by exporters, Prabha says that there are several hassles with the government. "A lot of merchandise is left with us because of the quota fixed by the importing government and the cut off price fixed by the Indian government," she elaborates.

In 1978, Prabha Chopra was acclaimed as the first self-made woman industrialist of Delhi and hailed 'The First Lady of the Garment Industry and Exports'. "Being a woman I have never felt that I should get any kind of special treatment from anybody. Once I have come out of my home to make a dent in the male oriented area, I am willing to face problems as they do. To bring in modern technology, quality control and professionalism to the garment industry is of prime importance to me: Perfection in all spheres is my motto," she adds.

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Economy

TOWARDS DENATIONALISATION

After World War II, nationalisation became a major thrust of the economic endeavour of many countries the world over. In recent years, however, a new wave of denationalisation is sweeping across. In Pakistan, the textile mills are being restored to the private sector. In Britain, Margaret Thatcher's administration has sold about a dozen industrial units. The telephone company was sold last November. Several other industries like shipping, ports, petroleum, hotels, automobiles and airways have also been denationalised. Bangladesh is selling its jute mills to private industrialists. France has also brought its public companies to the share market. The Japanese government has reduced its share in posts and telegraphs and telephones and is threatening to sell the railways which are running at a loss. In China, the government of Deng Xiaoping is liberalising private farming and individual activities. Russia, too, is moving, albeit imperceptibly, in the same direction.

And India? The model which India adopted in the 50s for its development efforts is called the Mahalanobis model. No doubt, India has achieved many successes during the last 28 years. It would be a folly to say that if what is being done by Rajiv Gandhi today, were done in 1956, India would have attained higher scales of performance.

In 1956, when Jawaharlal Nehru concentrated on expanding the public sector for developing the economy, private capital in India did not have the capacity to reorient the economy on a very large scale. But now we have reached a point beyond which the road is closed. If Mrs Gandhi had been alive, India would have travelled in the same old path with increasing unwillingness. However Rajiv Gandhi is eager to do something new. His Finance Minister, Vishwanath Pratap Singh, jettisoned the Mahalanobis model in his first budget.

But how can we say that the road is closed? The evidence can be found in the government's dealing with the question of direct and indirect taxes in the last 28 years. Now the situation is that if more indirect taxes are levied, people would be burdened with back-breaking inflation. If direct taxes are raised, nobody would reveal his real income and nobody would pay his tax. On the other hand, the government is not benefitting even though

it is earning more money. The reason is that the non-plan expenditures of the Central and state governments have increased so much that not many resources are available for development activities. The effect is that most of the money goes towards payment of salaries and dearness allowances to government employees, maintenance of public sector undertakings, covering up their deficits, maintaining the army so much so that the government is not left with any surplus.

It is easy to say that if the Mahalanobis model is honestly followed, socialism can still be a success. If all the black money flows into the government treasury and government collects all the taxes, the road which is closed would open up automatically.

However, all these leftist desires have no base because these cannot be fulfilled unless a new state and a new politics appear on the Indian scene. Today, nobody has the power to change Indian politics. Therefore, every political leader has to bring about maximum progress within the limits of the existing situation.

In fact, a group of economists believe that only the earners of black money have done a great favour to India. They believe that 'black money' has been used not only for constructing luxurious houses, travelling by air or opening numbered accounts in Switzerland, but also for investing in industries and thus generating employment. If all the black money had been legal and all the land distributed according to the land reform legislation, nobody knows what the shape of the country would have been. Would we have become a backward and poor country like Burma?

FACT-NOT FICTION

A robot has been entrusted with the task of protecting from fire a masterpiece of wooden architecture, namely the 12-dome Church of Transfiguration and other unique monuments situated on Kizhi island in northern Russia. The latest electronics will make it possible to protect the buildings constructed in the medieval ages.

The robot designed by engineers from Petrozavodsk and installed at the architectural preserve, does not in the least look like a brave fire-brigade chief in a traditional brass helmet. It rather looks like a little gun. The robot is controlled by an electronic attachment. In case of fire its sensitive electrodes react instantly.

Or would we have become like Poland, and East European countries? It is difficult to answer. Needless to say, we have become a country of white laws and black practices.

The Seventh Plan proposes to spend Rs 1,80,000 crores in the public sector. Rajiv Gandhi wants to neither reduce this nor have a plan holiday. In one way he is right. 'Because if we discard the Mahalanobis strategy and planning is abolished, the worst affected programmes would be education, literacy, rural health, poverty eradication and drinking water. But honest intentions do not raise income. Therefore, it seems that during the first year of the Seventh Plan, the government would not be able to spend more than Rs 30,000 crores. This is what was spent last year. However, in real terms it would be less than that because of inflation.

Then what can be done? Much depends on how far the private capitalists utilise the benefits of the concessions provided by the Finance Minister. Can they convert the Indian economy into a fast moving dynamic one? If they can do so, they would be providing employment to productive labour. This may slowly abolish the 'babu' culture. Expansion of private wealth would send more money into the government treasury because the tax rates are such that taxes can be paid. However, the government has also to reduce its unproductive expenses. For example, the way electricity boards are working in unscientific and non-commercial ways has no parallel in the world.

In the states where the chief ministers were enthusiastic about socialism, they nationalised buses. But all public roadways corporations are running at colossal losses. A simple question is: why more money should be provided to cover the losses of the transport corporations by reducing the allocations for drinking water or rural employment projects. Is it not better to denationalise buses so that the bus operators can earn more profits by charging the same fare in investing a part of their earnings and new investments and rest of it in government taxes?

The government is abandoning the Mahalanobis strategy of development. However, it would take some time to develop an alternative strategy. All discussions in the following months should focus on what the new strategy should be.

IT'S A WOMAN'S WORLD

BY MRINAL MANDE

When the UN Decade of Women (UNDW) began in 1974, expectations were high and a sense of euphoria prevailed among the women activists. It was assumed that by identifying and tackling the areas of socio-economic inequality, women's status could easily be elevated, and their centuries of oppression wiped out. But it was not to be so. Experience has revealed that at the heart of the situation lay, not generic differences, but the issue of power; whether it was power within the family, or economic or political power. Patriarchy, which has enjoyed an unchallenged supremacy for centuries, definitely did not react favourably when asked to share its privileges.

At a recent meeting of the UN Commission on the Status of Women, Leticia Shahani, Assistant Secretary General Incharge of the UNDW, declared that in the field of politico-economic power, women still lagged far behind. Statistics provided by 123 world governments, in reply to a UN questionnaire, have revealed that access to political and professional life was still severely limited for women and male predominance in the choicest of jobs remained intact. Interestingly, in the UN itself, only three women out of a total of 50 rank as Assistant Secretary Generals (Leticia is one of them).

The replies to the UN questionnaire have brought to light another fact—that global recession and the traditional social

have not helped to improve the status of women even in the developed countries. While, due to recession, most governments were found to have curtailed resources allocated to solving women's problems, social conditioning had prevented the proper socialisation of even those women who had overcome illiteracy and financial dependence. Eminent sociologist, Veena Das aptly describes the '70s as the 'Age Of Global Innocence'. This realisation is in itself, ironically, the first step towards tackling the problem of women.

Research done during the decade has indicated that in a developing country like ours, increasing male emigration from the countryside had led to most rural women getting fully involved in agricultural labour. But, notwithstanding numerous proposals and recommendations focussing on rural women as key targets, national and international rural schemes have still not directed resources to women. Bereft of

LEGAL RESCUE

No longer are Indian women a class oppressed. Neither are they subservient slaves to the whims of their male counterparts any more. The modern Indian women are self-reliant, totally independent, exuding an aura of confidence and dynamism. This drastic change in social status came about gradually.

Women have been granted equal rights and privileges as men by the Constitution. Provision has also been made for their welfare. Due consideration has been given to the legal status of women from varied angles such as criminal law for protection of women, inheritance, marriages, abortion, divorce, guardianship, maintenance and matrimonial property. But owing to the absence of a uniform civil code, certain persisting outdated provisions in the criminal law, highly inadequate enforcement mechanisms which render most laws ineffective and, above all, failure of social organisations to educate women on their rights, the requisite legal assistance has not been effectively provided to women in distress. And, it is in order to overcome these hurdles that the National Plan of Action put forth specific recommendations for the reformation of numerous existing laws. This resulted in some important enactments to reduce disparities.

Personal Law and Minorities: Review and amendments of criminal law relating to crimes against women and their protection were referred to

the law commission in 1980, and subsequently enactments were made to make the law more effective.

Family Courts: The Committee on the Status of Women in India (CSWI) after making an assessment of the legal status of Indian women, made certain recommendations which resulted in the passing of the Family Courts Act, 1984. The CSWI recommended mutual consent as a ground for divorce whereupon the Hindu Law was amended accordingly in 1976. Cruelty as a ground for divorce has also been added as well as "Option of puberty" earlier available under Muslim Law only. Also the period of waiting after judicial separation has been reduced from two years to one year. Then, before 1976, marriages under the Special Marriage Act were governed for succession under the Indian Succession Act with a special provision that a Hindu who got married invoked a severance from his joint family and separation of his share. An amendment in 1976, however, removed this lacunae, specifying that the provision would not apply if both spouses are Hindus.

Law of Adoption: Radical changes were made in the Hindu Law of Adoption whereby equal rights were introduced for men and women. The right of a girl to be adopted was legitimised. Apart from this, the mother's right over the custody and guardianship of a minor child has been strengthened by the judiciary.

Dowry: The Parliament made the Dowry Prohibition Act, 1961, more stringent in 1984 through an amend-

ment following the recommendations of a joint committee appointed to review the Act. These included stress on the need to widen the definition of dowry, to impose ceilings on marriage expenditure, to make the offence of dowry cognisable and to appoint Dowry Prohibition Officers. New deterrent punishments in dowry cases have become a regular feature. Women's organisations have the right to move courts on dowry offences. If a woman dies within seven years of her marriage and a police report or complaint is lodged by the victim's family, the courts take cognisance of the offence. And a 1976 amendment has added a new chapter, Fundamental Duties, to the Constitution enjoining all citizens to renounce practices "derogatory to the dignity of women".

In order to generate legal literacy among women, the National Committee on Legal Aid (NCLA) is publishing several books and pamphlets. A national plan for legal literacy has also been framed and steps are being taken to include legal rights of women in Adult Education Programmes, NSS Programmes and Workers' Education Programmes. Legal Aid Camps have been set up to identify those in need of legal aid, and a programme for training women social workers on the use of law to protect women has also been initiated. And while much has already been done by way of uplifting women, a little more needs to be done even now. By the way things are progressing, the task does not seem to be insurmountable.

traditional male support in the fields and burdened with young children and elderly relatives, most rural women in India face multiple problems, the most acute being severe shortage of fuel and fodder. Also, mechanisation of agricultural methods has further relegated women to marginal jobs and they are now, more than ever before, at the mercy of their landlords. An estimated 230m women of the developing world suffer from severe nutritional anaemia, a classic poverty syndrome.

In the urban areas, industry absorbs about 30% of the working women. Most of them being in the unorganised sector, female industrial wage levels in all groups show wide disparity with men, ranging from 50 to 90% for comparable work. Women are conspicuous by their absence from managerial and supervisory positions. Since the 1960s, women of the developing world account for 70% of the growth rate of women. But, as any observer of worldwide industrial growth knows, the industrial plants in developing countries are often ancillary to the industrial plants of the developed world, and as such, are liable to be somewhat shifty. The

women employees in this sector thus live in a legal twilight zone, and have no say in determining priorities and allocation of resources.

The biggest service done by the decade to the cause of women is that it has made them visible, statistically and politically. It has made women's issues a concern of governments and legislatures, and boosted research to assess their actual status. Although most of the time, it is the bread and butter concern which lies at the heart of women's political mobilisation, we have also, here in India, seen them during the decade, propelled by moral outrage on stage, protesting against a whole lot of issues—from dowry deaths, to flawed court verdicts and pornographic posters. During the recent general elections, we also witnessed the unprecedented phenomenon of an actual assessing and recording of female voting trends. As a visible voter one may say the Indian woman has 'arrived'.

In response to the mounting militarisation of nations the decade saw the issue of peace becoming an important preoccupation with women. In Copenhagen in

1980, half a million women demonstrated their commitment to peace. In recent years, Islamic fundamentalism has begun to spread and whatever its doctrinal diversities, finally it has only one target, women. If it allies itself, as it has in Iran and Pakistan, with the power of the state, there might well be stiff authoritarian opposition to the decade's thrust. In this sphere, the voluble protest of the Pakistani women against *Chadar* and *Char diwari* (the veil and the four walls) is heartening indeed.

How has the UNW equipped women to face the increasingly brutal backlash of vested male interests? In their growing involvement with the politics of knowledge, women everywhere are challenging the well-entrenched male authority, for the first time in history, by becoming both visible and audible. Considering their invisibility and centuries-long silence on the subject, this itself is no mean achievement. As a woman analyst summed it up neatly, "In the '60s, development was two-thirds Utopia, today it is a mess to be studied empirically."

Answers to TEST YOUR WORD POWER

- adjunct:** D: something extra but subordinate. Many people see athletics as merely an extra-curricular adjunct to higher education, which in some cases it is.
- apt:** C: well-suited; to the point, fitting; appropriate. Mahatma Gandhi saw khadi as the apt symbol for everything he wanted the country to stand for.
- cavern:** B: an underground chamber or cave. In chill caverns beneath the rolling vineyards of the hill town of Torgiano, Italy, towering rows of steel fermentation cylinders stand like huge rockets, each armed with 40,000 litres of some of the finest wine in Italy.
- chew:** A: to grind with teeth. The average West German chews his way through almost 90 kilos of meat a year compared with less than five kilos of fish.
- cohort:** A: companion or follower, number of persons banded together. From the beginning, Rajiv Gandhi built bridges with politicians whom Sanjay and his cohorts hated.
- concoct:** A: to prepare by mixing together; make up; invent, devise. Much of the research in food engineering has been concentrated on concocting high-protein, low cholesterol meat substitutes.
- deplore:** A: to regret; deprecate; complain of. However much academicians may deplore the lowering of standards resulting from hasty and ill-prepared spreading of university education, the growth of higher education cannot be stopped.
- dubious:** B: questionable as to value, quality or origin; of suspected character; not clear or decided; giving rise to doubt. Despite declarations of a clean administration from the Prime Minister, the ruling party continues to have within its ranks individuals of dubious reputations.
- farce:** B: absurd and useless proceedings; a ridiculous sham. The incidence of mass copying and of other unfair means has increased to such an extent that examinations in some of the universities are becoming a farce.
- frugal:** C: economical; careful; sparing. The quantity of food West Germans tuck away astounds visitors from more frugal nations.
- heap:** A: to pile or collect in great quantity, fill, load with. Despite the praise dieticians heap on it, consumption of fish in West Ger-

many has remained static and is tiny compared with meat.

- incinerate:** A: to burn to ashes; consume by fire. According to legend, the female Ganga was brought down from heaven with the connivance of Lord Shiva in order to purify the ashes of King Sagara's 60,000 sons, who had been incinerated by the wrath of a sage for overweening pride.
- lucres:** D: monetary gain; profit; money. In Kerala, as in other states, the alcohol business is known for its lucres and ruthlessness.
- oblivious:** B: unaware; having no memory. The men and women who dip into the Ganga, often drinking from it, are oblivious of how impure the river has become at this point (Haridwar) where it first enters the plains.
- overwhelm:** A: to engulf; destroy; crush; weigh down; overthrow; upset. When the Latin American debt crisis first struck in August 1982, it seemed like a virulent fever that might quickly overwhelm the world financial system.
- proselytise:** A: to convert from one religion, belief or party to another. As soon as they realised that it was Rajiv Gandhi's star that was on the ascendant, many Sanjay loyalists were proselytised to his cause.
- sloth:** A: laziness; idleness; habitual indolence; disinclination to exertion. The real surprise about the Japanese young is that affluence has not, so far anyway, led to rebellion or sloth.
- stew:** A: to cook, or be cooked, by slow boiling; to fret, worry or fuss. The liquor trade is a pressure cooker where morality turns into vapour and demand and supply stew in the quick fire of profit.
- vendetta:** D: prolonged feud marked by hostilities; hereditary feud between families in which members of each family commit murders in revenge for previous murders. Unlike his mother and brother who nurtured vendetta and planned retribution against their foes, Rajiv Gandhi began his career professing a politics of reconciliation.
- woes:** C: trouble; calamity; affliction; sorrow. After three days of closed-door talks of the policy-making committees of the IMF and the World Bank in April, the world's money men were no closer to a cure for the debt woes of Latin America.

Vocabulary Ratings:

28-18 correct
17-15 correct
14-12 correct

exceptional
excellent
good

Green Revolution: How Green?

Indian agriculture has undergone a total transformation in the last two decades. The performance of wheat and paddy in terms of yield per acre, particularly, has been very impressive. The three to four times increase in yield is attributable to the usage of dwarf variety of seeds, combined with increasing use of fertilisers and improved irrigation facilities. This dramatic change has been hailed as the 'Green Revolution'. Though there are divergent views on its extent and depth, no one doubts the sweeping nature of changes brought about by it.

Increased use of High Yielding Variety (HYV) seeds with greater use of fertilisers, manures and pesticides along with improved irrigation facilities, multiple cropping, modernised methods and implements of cultivation, better credit facilities, and improved infrastructural framework, are some of the important factors responsible for its transformation in agriculture.

The Green Revolution in India remains confined mainly to the north-western region consisting of Punjab, Haryana, Gujarat, Rajasthan and the western belt of UP. Punjab has been the bulwark of this revolution, so much so that the resultant changes have often been dubbed as the 'Punjab phenomenon'. The reasons for the success of the new package programme in Punjab are easily identifiable. The availability of extensive canal systems and good ground water resources with better infrastructure and seeds, have contributed significantly to the success of the 'Punjab phenomenon'.

In spite of the considerable improvement introduced by the New Agricultural Strategy, recent trends in agriculture clearly reveal that the erstwhile momentum is gradually petering out. The food grain output in the last five years has increased at the paltry rate of 1.5% per annum against a 4-5% annual rate required to feed the teeming millions in India. The yield per acre has not remained high and the per capita grain availability is still very low. To feed the rapidly multiplying population, the yield per acre has to rise and this appears to be more difficult today than it was in 1965, when the Green Revolution had its impact, creating regional imbalances. Half the country remained outside its pale and about one-fourth of India derived limited benefits

that the national Green Revolution was not managed in the right way and remained limited to two or three states, undermining agricultural progress in the country. Though Punjab represents the remarkable success of the new strategy, still it does not make a permanent macroscopic country-wide Green Revolution.

One of the factors which contributed to the success of the Green Revolution is the land-man ratio. In areas where this ratio was adverse, the New Agricultural Strategy failed to improve productivity in agriculture. In Punjab the land-man ratio was quite favourable and, therefore, the usage of the new inputs resulted in a dramatic transformation. The large holdings in Punjab also facilitated the use of the new package programme. In other regions the fragmented and scattered land holdings thwarted all attempts at increasing the yield per acre. This is quite unfortunate particularly when we find that the alluvium is more fertile in some of these regions. The lack of this basic ingredient has been one of the reasons for the limited success of the Green Revolution. Therefore, consolidation of small holdings before the use of new and improved seeds and fertilisers, becomes of paramount importance. This is particularly true for eastern UP, Bihar, Orissa, West Bengal and Rajasthan, where the majority of the population is dependent on agriculture and living in conditions of abject poverty. Unfortunately, no progress has been made in this direction despite the six Five-Year plans. Though in areas like Punjab and Haryana attempts have been made for consolidation of holdings, even here there are wide gaps. This has resulted in the emergence of inequities in land ownership and has adversely affected the poor farmers.

The efforts for the extension of the Green Revolution thus bristle with difficulties, which are compounded by the conservative outlook of the people. The need is to introduce land reforms, optimise the farm size and spread the irrigation network. Only institutional reforms, in conjunction with the new input package, can facilitate a faster growth rate in agricultural production.

In conclusion, we can identify non-economic land holdings and pathetic dependence on monsoons as the prime factors responsible for the limited spread of the Green Revolution. Bold and imaginative planning is called for to overcome the bottlenecks. The introduction of institutional reforms, together with technological progress in the sphere of agriculture, is the prescription for the spread and continuation of the Green Revolution.

S.K. RAY

Preserve nature to preserve human beings. This is the succinct message from environmentalists the world over. The rationale behind it is simple. The ecological system is an integrated whole. Its components are inter-related and inter-dependent. So, when one part of the system, however small, is destroyed, the survival of many other species is endangered. And since man has been the main culprit in jeopardising the ecological balance, it is within man's power to remedy his own sins.

The urgent need for man to take immediate action was stressed upon recently by renowned environmentalist S. Dhillon Ripley, Secretary Emeritus, Smithsonian Institute, USA, in a highly illuminating lecture delivered by him at the National Museum of Natural History, New Delhi. One cannot help but agree with Ripley when he opines that the problem of ecology is essentially a human problem. The restoration of this vital balance would necessitate long range projects, involving a great deal of effort and dedication; it is not susceptible to high-speed mechanical solutions.

In explaining why ecology has always occupied a back-seat in man's scheme of affairs, Ripley posited two main arguments. For one, it is a very mysterious and much misunderstood subject. Consequently not much importance is given to it. It is not difficult to agree with him on this point, especially when one notices the frequent reference to the 'ecology of a room by people while deciding upon the decor of their homes. What is more important, however, is the fact that technology has acted as a blinder to the original and natural source of man's livelihood. Even on this point, agreement with Ripley is not difficult. One has only to stop and consider how accustomed man has become to the appurtenances of modern day living, so much so that he takes everything nature has to offer—the soil, the air, the water etc. for granted.

If man's present indifference to nature is allowed to continue, one cannot rule out the distinct possibility of a day when human beings would run out of water, rainfall, soil, air, etc., Ripley emphatically asserted. Here again, it is easy to agree with him. History is replete with examples of how man's indiscriminate destruction of forests brought about dramatic changes in climatic conditions.

Take a look at the Ganges, to many the symbol of India's spiritual fortitude, and what does one see? A mighty river being reduced at stretches to a polluted streak. Ripley pointed out that hydro-electric projects, which require large-scale deforestation, are fast destroying the natural

reducing the siltiest rate of beneficial elements. Similarly, industrial effluents streaming into the Ganges are adversely affecting the natural purifying and filtering property of its minerals. The Ganges must be saved. But how? Ripley asserts that social consciousness is the key.

What is India doing for its environment and ecology? It would be a denial of fact to say that it is not doing anything. At the same time, one can confidently maintain that what it is doing is not enough, nor is it the best. In this connection, the example of Orissa can be cited. Here, mono-culture, the practice of growing particular types of trees (teak and sal), is the main thrust of the conservation effort; whereas, according to Ripley, poly-culture, the practice of growing a variety of trees, is absolutely essential for conservation. Diversity of approach to nature is what is required. Mono-culture makes the soil poor while poly-culture makes it rich. Apparently in Andhra Pradesh, there is much more respect for forest diversity than in Orissa.

All said and done, India needs to do a lot more on the ecological front. PM Rajiv Gandhi's Ganga project is a commendable step in this direction. Many more such long-range projects need to be undertaken because, as Ripley rightly points out, national security includes ecological security.

VIJAY KONWAR

Committed Judiciary

India has adopted parliamentary democracy and has a federal set up. Hence, the need for an independent judiciary in the country. It is believed that the separation of judicial power from the executive and legislative branches of the State is essential in a democratic set up. The Judiciary, therefore, is entrusted with the charge of preventing arbitrary use of government authority and safeguarding the rights and liberties of the citizens. In addition, the Judiciary also acts as the guardian of the Constitution. The makers of the Constitution have endeavoured to ensure the independence of the Judiciary through various constitutional provisions, e.g., as per the Constitution of India, a judge, once appointed, will hold office till he attains the age of 65 and cannot be removed earlier except for proved misconduct or incapacity, by a process analogous to impeachment. The Executive, thus, cannot remove him.

Right from the time of the promulgation of the Constitution in the 1950s, successive governments, in their eagerness to deliver the goods, have consistently endeavoured to play down the judiciary. This conflict between the executive and the judiciary, has mounted particularly

became the accepted wisdom in the ruling circles to hold the courts responsible for throwing spanners in the way of social change. This accusation was levelled against the Supreme Court in its judgment in the Bank Nationalisation case and the Privy Purses case. Though the judgments were nullified through Constitutional amendments, yet the feeling that the judiciary was trying to act as a super legislature took roots.

The appointment of Justice A.N. Ray as the Chief Justice of India, in 1973, superseding three senior judges, was perhaps the beginning of the executive's action to cow down the judges. This appointment was against the established convention of considering the senior-most judge for appointment to the highest seat in the Judiciary.

During the Emergency large-scale transfer of judges was effected, which demoralised the practitioners of justice. In 1980, when a judicial bench ordered the striking down of Sec 55, and Sec 4 of the 42nd Amendment, the fury of the government knew no bounds. New strategies were prepared by the government to 'teach a lesson' to the erring judiciary. It was decided that the time was ripe for inducting progressive judges into the courts. Another approach which was executed largely, was transfer of judges which included the Chief Justices of High Courts. This move was challenged, but the majority decision in the 'judges' case, curbed the independence of the Judiciary and also deflated the role of the Chief Justice of India in judicial appointments.

The new government has promised to restore the prestige of the judiciary and the PM Rajiv Gandhi claims that he is against the transfer of judges. All these are welcome signs but what is likely to transpire, only time will tell.

Reforms In China

China has entered a new and exciting phase in its development. With the recent reforms a new situation is emerging—after years of 'resolute, heroic and indomitable struggle' by the Chinese people against capitalist and imperialist forces. Presently, Chairman Deng Xiaoping is going full throttle in his crusade to modernise China. The experiments which began in 1978, with the advent of the new leadership, have till now proved successful, mainly because of their close proximity to the aspirations of the average Chinese citizen—who has always preferred a rising living standard to mouthing patriotic Maoist slogans urging him to sacrifice 'for the cause'. The reforms to reshape the urban economy, announced in Oct '84, reveal the determination and foresight of those at the helm in Peking. In

the approach to the poverty-stricken traditional economy is now to be set on the path of modernisation with the help of an 'open door' policy, foreign funds and modern technology.

The first round of changes were effected in the agricultural sector by the 'ultraleftist' Deng in 1978. The age-old commune system gave way, in the new scheme, to the family farm and the 'responsibility system'—cultivation of land by peasants individually or in groups under contract with their team. The consequent increases in the incomes of the peasants and the annual rise in the grain output has dramatically restructured rural China smoothly and in a short time.

All this while the urban factories were unable to keep pace with the growing demand for consumer goods emanating from the higher earnings of the peasants. This provided the basic motivation for the 'October 84 revolution' of Deng Xiaoping. The results could be more profound, longer lasting and more significant than Mao's cultural revolution. The landmark of economic plan, most likely to chart out a new course of development, was duly endorsed by the Central Committee of the Chinese Communist Party soon after the changes were announced. The measures include freeing the urban economy from the fetters of rigid state control. The state enterprises are to be cut loose from the strict production quotas and the heavy subsidies imposed by the central planners. Henceforth, Chinese industries will move distinctly along capitalist lines, as the market forces will now guide the various enterprises. The rise or fall of an enterprise, therefore, will depend on its ability to cope with the forces of demand and supply. Clearly the Central planning is the biggest casualty of the new approach. The factory managers, the strategy envisages, will be given more power autonomy to recruit and 'fire' employees without much bother about egalitarianism.

Another remarkable change in recent times is that 'profit' is no longer a dirty word. The surplus, as it is now called, will be taxed, with the balance being available for reinvestment. This is different from the earlier practice of the state taking away the entire surpluses for the common cause. The encouragement to consumerism and free enterprise is quite contrary to the Chinese ideological moorings but the new leadership is prepared to shed its traditional outlook for the betterment of the people. In fact, the *People's Daily*—Communist Party's newspaper—went to the extent of describing Maoism and Leninism as obsolete. But this was too much for the die hard Maoists to consume and hence the propaganda was stopped but the 'action' continued. The hopes are

open door policy will take a highly industrialised China into the 21st century.

In spite of all this liberalisation, the press and literature still continue to be under the strict control of the state machinery and the role assigned to them is that of extolling the virtues of the new changes creeping into the Chinese society. But voices are being heard for greater freedom to journalists and newspapers. More difficult would be the containment of the vices accompanying consumerism. Inflation could also endanger the new

and continue down

soaring prices, at least initially. The highly disciplined and regimented Chinese may be baffled by the market mechanism as the recent panic buying in the shops indicates. Moreover the wage-price flexibility cannot be relied upon to correct distortions as the experience of other countries shows. Still we'll have to wait for some time before making any further comments. Another serious hurdle could be the reluctance of the foreign investors to 'block' their funds in the Special Economic Zones of a coun-

employment are likely to be mixed, but for the success of the new measures the leadership will have to contend with the hard-boiled Maoists.

Whatever the future unleashes on the Chinese, the new vigour and vitality in their economic policies is unmistakable. The confidence and courage with which they are willing to tread on an unknown path, which requires total reinterpretation of their ideology, is admirable.

J.V. A.K.

SRI LANKA

(Continued from page 14)

the island refugees, so much so that Athulathmudali, who visited India recently, went back with a good impression and the Sri Lankan press was optimistic about Rajiv's stand. The cause for this optimism was that Zaire Airways DC-8 cargo aircraft carrying arms and ammunition to Sri Lanka was forced to make an unscheduled refuelling stop at Trivandrum around the time that Athulathmudali was in New Delhi. Instead of the incident hampering talks between the two politicians, Rajiv personally saw to it that the aircraft was allowed to proceed to Colombo. The general feeling was that he would have detained the DC-8. On another occasion, a Sri Lankan gunboat, accused of terrorising Indian fishermen, was captured within Indian waters. Rajiv's government, instead of escalating the issue, opted for exchanging the vessel for 17 Indian fishermen held in Sri Lanka since last October on charges of poaching.

Cooling Off

Although Sri Lanka has reason to feel optimistic at the change in the attitude of the Indian Government, the atmosphere in India is one of doubt and gloom. Athulathmudali's visit was seen by the Indian press as of little importance as hardly any progress was made. Further, Jayewardene turned down Rajiv's request for a meeting on bilateral issues without any reason and sent Athulathmudali instead for a flying visit. Jayewardene made it clear through Athulathmudali that he was in no hurry to restart political discussions at home to resolve the problem, saying that a "cooling off" period is required before he could start a dialogue with the TULF. The only initiative Colombo has shown is a suggestion for the joint patrolling of the Palk Strait by both countries. It is also contemplating lifting the surveillance ban and permitting supervised fishing in the area which was declared as a 'surveillance' zone last year. This would help the Indian fishermen, many of whom have been harassed and even killed by Sri

Lankans, who accused them of fishing in Sri Lankan waters, or worse, of transporting arms of Tamil guerillas in Sri Lanka. However, unless the internal problem in the island is solved, the refugee influx into India will increase. It is, therefore, in India's interest to see that the issue is solved politically, at the earliest.

In fact, it is in Sri Lanka's interest, too, to solve the problem fast. The island paradise has a shattered economy at present. According to the Central Bank of Ceylon, factory industry and small industry showed a 2.2% growth against 9% the previous year; the manufacturing sector registered a growth rate of 0.8%; public sector production declined in real terms by 15% and real capital income registered a decrease from 3.3% in 1982 to 2.5% in 1983. Tourism, one of the leading industries in Sri Lanka has fallen to No. 4 position. Tourist arrivals dropped by 17% in 1983, and the figures registered a further 5.9% fall in 1984. Tamil businessmen and entrepreneurs have gone bankrupt following the 1983 anti-Tamil riots. According to official statistics, 122 industrial establishments suffered an estimated \$70m worth of damage and while 30 production units were totally destroyed, 15,000 manufacturing jobs were lost. Most significantly the Tamils were disproportionately prominent in key sectors like accountancy, engineering and medicine. Their sudden departure had left many businesses in disarray. Sri Lanka's fragile economic structure had therefore, been badly hit. Prices have risen 200% since 1978, the balance of payment is unfavourable again, there is an increasing gap between revenue and expenditure of the government and the foreign debt is over Rs 45,000,000,000.

At the same time, if the ethnic problem escalates further, the island may become the cause of increased superpower presence in the Indian Ocean. The US, Japan, Britain, Canada and W. Germany are among the chief donors of aid to Sri Lanka, and they can help to solve the issue by cutting down aid on the rationale of increasing human rights abuse by the army and the fact that little of the aid is chan-

nelled to the Tamil north. But the fact that so far they have ignored human rights abuse in the island would signify that they have other interests in the region. It is a fact that the Israeli Mossad and the British Special Air Services (SAS) have teams to train and equip the unruly armed forces in Sri Lanka. An Israeli spokesman frankly admitted recently that "this marks our return to Asia". More significantly, the US has erected a transmitter ostensibly for the use of the Voice of America (VOA) in Sri Lanka. It is the most powerful transmitter outside the US and defence analysts feel that it may be a communications relay facility between Diego Garcia and the Pine Gap communications centre in Australia. Colombo has no editorial control in the programmes. But what is important for India is that it is felt that the transmitter is capable of jamming the Indian defence communications system.

Although the US has made it clear that it is in favour of a political solution, it is also clear from various statements as to where its interests lie. Before a visit to Colombo, Reagan's ambassador at large, Gen Vernon Walters issued a statement deploring the Tamil guerilla attacks as a "serious and unwarranted challenge to the government of a practising democracy". Jayewardene's recent statement also implies that Western countries would give aid to tackle "residual terrorism" if an acceptable political arrangement could be forged. What "residual terrorism" would amount to in Sri Lanka, only Jayewardene and his army know. However, what is important for India is that a prolonged ethnic conflict would lead to increased superpower presence too close to India. In fact, to promote their own interests, it is not unknown that the superpowers would rather have a troubled region rather than a peaceful one.

All this brings us back to square one: the failure to solve the problem at an earlier stage has led to complexities which had not existed earlier. If the conflict continues, the complexities can only grow and not lessen. And, as the killings go on, Sri Lanka is becoming, or rather, has already become a classic case of paradise lost. ■

Coffee Break

JOYOSHREE ARORA:
TALENT HAS NO BOUNDS



Only a Bhagwanti for every Basesar will keep the family ship afloat...

She is young, ebullient and has talent in her blood. Any other woman in her place would have breezed through the labyrinth of success to scale the dizzy heights of fame. But Joyoshree Arora—the endearing *Hum Log* mother—has chosen differently. "My priorities are clearly chalked out and I have never allowed my potential talent to take the upper hand," she confided. The familiar wry smile on her lips was typically Bhagwanti's. "Taking up a full-time job would have been meaningless. So I decided to utilise my acting ability. I am happy and my family is equally happy as I get enough time for them," Joyoshree claimed, in a confident tone.

As a busy army wife, a mother of two schoolgoing girls, a schoolteacher herself till recently and an 'A' grade TV artiste, don't you ever find the ground slipping under your feet?

"I am an early starter and I do trespass a little on my resting time. But life is too beautiful and there is plenty to be done. I am used to home management ever since I was 18. Army life has taught me to race against time—postings, parties, socials, friends and all the glamour that

goes with it. Sounds good alright but there isn't much money in it. So I took up teaching and a bit of television now and then. The timings are spaced out so that the family never goes unattended. Determination and a sense of organisation facilitate time-management."

Can you claim to have had a successful acting career before doing *Hum Log*? Are you simultaneously doing other TV serials?

"*Hum Log* has definitely given me the kind of publicity one gets only after doing 10 films. At the moment my loyalty lies only with *Hum Log*. Which is why I am not working for other TV producers."

"We Bengalis are art lovers—be it dancing, music, drama or painting. I learnt dancing and was good at Rabindraki (dance form based on Rabindrasangeet). But I loved dramatics though I was never trained in acting. It just came off-hand right from the age of nine when I did *Abhyigyan Shakuntalam*. I try to keep my eyes and ears open, observe human behaviour and human reactions. I know several regional languages and dialects—a plus point of being posted anywhere in India."

"During our postings I kept my acting alive. Peter Ustinov's *Half Way Up The Tree* with a semi-professional group at the Wellington Staff College, in 1977, offered the kind of challenge I wanted to face. Besides, I had roles in *Chandalika*, *Chitrangana*, *Abhisar*, etc. In 1978 I compered my first school programme for Radio Jammu and joined Jammu TV in 1980. Subsequently I acted in TV plays in Jullundur. *Ittafaq Se* was one of my popular plays where I played a sophisticated, young Girija. I also did a regular pre-recorded TV programme *Apne Likha*, for Jullundur TV. As leading lady in *Ajnabi* I enjoyed my role of a lively young college girl. The audience response to my role was encouraging. My entry into *Hum Log* is a result of previous stage performances where I devotedly worked hard to channelise my potential in a set direction."

How do you like the idea of mothering *Hum Log*?

"Bhagwanti is one of the most sensible characters in *Hum Log*, next to Dadaji. Am I proud to have bagged her role! She is the pivot around which the entire family wheel rotates. Bhagwanti is no *bechari*, mind you, as many people have misunderstood her to be, nor is she a martyr. She is tolerant, practical and balanced. She does not rebel against the injustice meted out to her by her indolent husband; nor is she affected by the spiteful remarks of her cunning mother-in-law. For, Bhagwanti is aware of the repercussions—total disharmony. She revolts only when her daughter-in-law is unjustly criticised. But, even in the worst

situations, she does not indulge in self-pity—the strongest element in her character."

"Bhagwanti is also well-informed. She knows the dangers of seeking jobs abroad, through agents. She wisely suggests that her son should set up his *dhande* instead of going to Dubai. The *Hum Log* mother is also an intelligent woman who aspires for a better life for her children. '*Pekane walian khila kar khush hoti hain*,' she tells Badi who asks her mother to take care of her health."

"Now and then she makes an effort to reform her husband and wean him away from the bottle. When the hypocrite in him blurts out '*Tujhe to rang mahal me basana chaha*,' Bhagwanti promptly cuts him short: '*Ghar grihasti rang mahal me rahakar nahin chalai jat....Gharwale bano aur gharwali mano!*'"

"In fact, I consider Bhagwanti to be a totally liberated woman. What if she isn't consistently vociferous? Isn't she aware and mature? As a traditional middle-class woman, she displays a sense of dignity in being soft-spoken, coy and even tight-lipped in the presence of her in-laws. Life's battles can often be won by silent interactions."

Can Bhagwantis exist in this era of liberated women?

"In the corner of every woman's heart there is a Bhagwanti. And every family which has a Basesar Ram, can survive only with the help of a Bhagwanti. Her sense of tolerance and dignity are essential pre-requisites for every woman who thinks in terms of family life."

What are your future plans?

"I have no doubts that *Hum Log* would fetch me more and better roles in TV serials and even TV films. But I am no more a novice in the line. And I am not out to grab roles—not even film roles—unless they are worthwhile. Recently I had an offer from T. Rama Rao to play Jackie Shroff's mother. I am not against a mother's role. The fact is that a brief sob-sob role in a commercial film wouldn't carry weight. It would just be an extension of the *Hum Log* mother. Even the monetary returns in Rama Rao's film were hardly attractive."

"I am game for any kind of role in art films. If directors like M.S. Sathyu, Satyajit Ray, Sai Paranjpe and Mrinal Sen were to give me a chance in their films, I would happily accept them even with minimum remuneration. The mother in *Saransh* is the kind of character I want to portray. After all, there is a sense of dignity attached to every profession. And if ever I move to films, I will make sure the roles have a significance."

"I am not in search of fame but in search of a versatile actress in Joyoshree Arora."

Prabha Gopal, New Delhi

Adventure Venture

DESTINATION DUMBELL 12

1st Mar. 85. It was like any other day: a humid March afternoon, with the summer heat picking up. But for Fg Offr Hari Kumar, strapped up inside an Ajeet fighter, awaiting line-up instructions, it was going to be a day he wouldn't forget for a long time to come. Twenty-four-year-old 'Harry', as his close friends call him, had only 340 hrs of total flying experience.

A thorough check of all the systems and instruments had already been carried out. Counting seconds as beads of perspiration rolled down his cheeks making the oxygen mask slippery, he heard the call from the tower. "242 clear line-up; winds 10 to 15 knots. 1 o'clock." He checked all clear, opened throttle and rolled on to the centre of the runway. He was ready for take-off for a practice live bomb sortie over the Air to Ground Range. A last glance at all warning lights and cockpit instruments; everything all right, showing precisely what they should show. A crisp call from the pilot to the tower: "242 take off." Tower cleared him, "Take off, turn left, cross overhead 1 km."

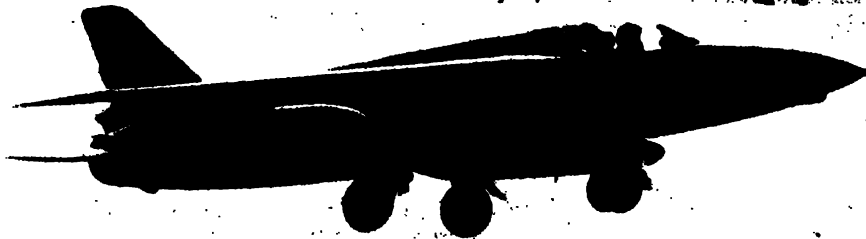
The pilot opened full throttle; felt the power building up as the single Orpheus engine started gulping down fuel to build up a dizzy 10,000 revolutions per minute. He released brakes and felt the healthy acceleration as the little fighter, which shot into fame during the 1965 operations, rushed down the centre line of the runway. Speed coming to 130 kts, the nose wheel was promptly raised and at 150 kts, air borne—a smooth transition from ground to air. It took a few seconds to establish a climb to 1 km crossing overhead the base. It was time to change over to range frequency and obtain clearance to join range. As he changed over, the Range Safety Officer informed him, "242, range is busy; hold over point 'Kilo', orbit left at 1.8 km." Harry acknowledged the message and continued climbing to 1.8 km with full power. The sweat was drying down as the cockpit air-conditioning system started to become effective. Approaching point 'Kilo', the power was brought down 80% and the aircraft levelled out at 1.8 km. It was about 18 km from base and he informed the range that he was holding over 'Kilo'.

Harry started a gentle left orbit and was already visualising the bomb target and where to put his sight according to the prevailing winds and gravity drop, when he felt a sudden deceleration and loss of engine noise. He checked the instruments. The revolutions per minute gauge was winding down like an unwinding coil. He felt as if an unseen hand had closed the throttle. His first reaction was, "Hey no! It's not true." But within a second, his training at the renowned No 9 Squadron Air Force (The 'Wolf Pack' as they are affectionately called) took charge of the situation. He told himself, "Mister, believe what you are seeing. You have had engine failure, now what?" His reflex actions, built up on combat-oriented training, took over. He rolled out towards the base and tried to relight the fighter's engine. Moments of anticipation, but the engine kept winding

down. He transmitted to the Range Safety Officer about his problem; and again tried to revive the dying engine. Harry could count the microseconds! It finally registered that the engine wouldn't re-start. He had the most dreaded emergency on board that can happen to a jet fighter. He had to cope with the flying of a disabled aircraft with a dead engine.

Gliding towards the base, he had a height of 1.8 km. With a dead engine, it would take one and a half minutes at the best gliding speed before he touched mother earth. He was authorised to eject; but as he was flying over a

A display of rare courage, presence of mind and exceptional flying skill and Fg Offr Hari Kumar (right) was back on earth after an unforgettable encounter with death at a height of 1.8 km, when the engine of his Ajeet aircraft (below) failed.



thickly populated area, he ruled it out. More over, it would mean the complete destruction of the aircraft giving no chance for the experts to analyse the cause of the malfunction. He had only seconds to decide—should he ensure his safety by ejecting or take a chance by gliding the fighter to the air base? Harry decided to coax the crippled aircraft to limp back to base, even though 15 km was a long distance for the fighter. He knew he wouldn't be able to make it to the runway from which he had taken off only a few minutes before. His only chance was to put the aircraft down on runway 12, which was not in use at the moment. He informed the base and started gliding towards his final destination. He knew he had to muster up every little thing he had been taught and keep his cool, if he was to reach the dumbell on the beginning of runway 12 which he could see from 10 km away.

Meanwhile, the Base Air Traffic Control



Tower had transformed into a centre of hectic activity. With the cool efficiency of professionals, the crash crew mounted their fire-fighting equipment; the runway controller was on the look out for the aircraft, due any time now; all the other flying aircraft were informed to keep clear of the base and to maintain radio silence. Now they had only to wait. Tense minutes mounted as the chronometer at the Air Traffic Control ticked off the seconds.

Suddenly the flying supervisor spotted the fighter on the final approach, with the landing gear lowered. People looked anxiously at the Ajeet fighter which continued losing height, a minutes appeared to be eternity. The aircraft touched down just at the beginning of the runway. It started decelerating with the tail-chute opening to form a perfect umbrella; it came to a stop just short of the end of the runway, and from the control tower, people saw the pilot jumping out.

Booktalk

THEN AND NOW

The book * can be divided into two parts *The Nehrus And the Gandhis* and *An Indian Dynasty*: the first being the text written by Tariq Ali, the second comprising the introduction by Salman Rushdie. Rushdie sets out to prove that "Indian democracy" has not been left in good shape "by its ruling family" and that "a royal court, a ruling elite of intimates of the family, unelected and unanswerable to anyone but the prime minister" has been created at Delhi. There is a total lack of consistency between such preconceived notions and what Ali has to say. In fact, if one

were to disassociate Rushdie's introduction from the book and cut out *An Indian Dynasty* from the title, it would make quite good reading. But if one were to read the book after reading the introduction, the inconsistency between the two will jar the mind.

Ali, if anything, is sympathetic to both Nehru and the Gandhis. Even Sanjay Gandhi, the bete-noire of so many anti-emergency persons, both in India and outside, is not accused of being a fascist or having autocratic tendencies, but of having an obsession for speed. He says that "Sanjay's main purpose was to clear the ground for an unbridled display of free enterprise in town and countryside" and for this "gathered behind him" the Youth Congress, people who felt that caste and class prejudices should not be allowed to stand in the way of constructing a unified group of property-owners. Sanjay

the upper castes, and where he went wrong was that he tried to speed up the process. Ali is not too critical of the emergency period, either, calling it a "constitutional coup d'état, carried out with the support of the large Congress majority in Parliament". If anything, he is critical of the Janata period, depicting it as inefficient. Ali appears obsessed with the underlying communalistic strain in Jan Sangh, and this emerges again and again in his book, specially in the pages on the Janata regime. He, in fact, points out that the Janata was less democratic than Mrs Gandhi during the emergency period. While writing about the election of the Prime Minister in 1977, he says, "Hardly were they in power than they were ignoring Parliament and deferring to the judgment of Jayaprakash." J.P. himself is depicted as a "veteran mystagogue" his movement is called "bogus", and Raj Narain the "giant killer" is dismissed as a "buffoon". Mrs Gandhi, on the other hand, emerges in a much better light, for she took "full responsibility for the defeat" of her party in 1977.

However, one finds little in the book to support Rushdie's contention that India is being ruled by a "dynasty". Ali himself disproves the thesis by repudiating the legend that Nehru pulled strings behind the scene to promote Mrs Gandhi's political advancement. He confirms that Kamraj and his syndicate were the political "bosses" who wanted to keep the "independent" and "puritan" Morarji Desai out of power and therefore got Indira Gandhi elected. They felt that she would be like clay in their hands, to be moulded as they saw fit. About Rajiv Gandhi, Ali says that his "first instincts" after his mother's assassination was in favour of a senior minister taking over, and later he sought "popular legitimacy". This is certainly not how a dynasty works. The overall impression that one gets is that Ali has tried to superimpose an independently-arrived-at deduction on a narrative which is essentially objective and does not support that deduction.

On the whole, the book has little to offer by way of novelty, but this is perhaps because it was completed in only 42 days. What triggered off the author to write it, was Mrs Gandhi's assassination and Rajiv's alleged "succession"—the objective situation would make any well-written book on the Gandhis and the Nehrus popular. The book is basically a run-through of contemporary history starting with the freedom struggle and coming on to the Indian political scene today. It is, in fact, a good resume of newspaper articles in the post-independence period, with a brief historical background. It is, however, interesting at parts, especially when the author's point of view comes through. His sensitive and perceptive interpretation of Nehru and Mrs Gandhi and the way their minds worked are especially worth noting. Further, his analysis of certain events is quite objective and free from partisan bias. If it were not for Rushdie's introduction, which puts the reader on the wrong track and makes him look for things which are not there, the book would be stimulating reading for most of us who have lived through the times Ali writes about.

S.B., New Delhi

*THE NEHRUS AND THE GANDHIS: AN INDIAN DYNASTY by Tariq Ali; published by Picador, London; distributed by Rupa & Co; price : £2.50; pages : 300.

TOO MANY PEOPLE?

Even if the continents are not going to sink one day under the sheer weight of human bodies, the problem of over-population in some countries is going to make people wish they had never been born. *Some* countries is the key point to notice, though, and not a great many either.

The present cycle of population expansion is already slowing down, and birth rates may drop to replacement level in most of the world in the next 25 years. It could take another 70 years before world population stops growing, because almost half the population in Third World countries is now under 21. A century from now, however, the world's population will probably have stabilised at somewhere between 8 and 11 billion people.

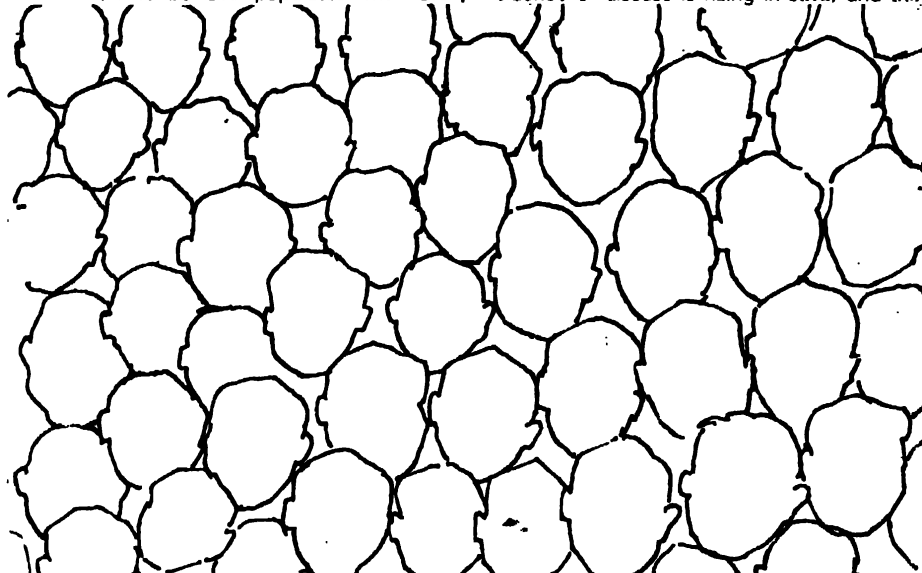
Over-population is a misleading term, if you take it to signify poverty, hunger and hopelessness. England is not 'over-populated' with over 900 people per square mile (350 per sq km); India is said to be 'over-populated' with less

more than doubled in the 18th; by 1850, at its existing growth rate, it would have reached 10m. But it never got there.

Ireland had exactly the same population density as England at the time, but in Ireland there was no industrial revolution going on; the extra population had to find a living on the land. By 1845 a quarter of the population had no work, and were virtually starving in the winters.

In 1846 the Irish potato crop failed. In the next five years a tenth of the population starved to death, and a million fled to England and America. The emigration never ceased after that, and during the 19th century over 5m people left Ireland. The population fell from the 1845 peak of 8½m to 4½m in 1900. Ireland is the classic modern example of demographic disaster.

This sort of catastrophe now lies in wait for Bangladesh or the Indonesian island of Java. Each has over 90m people, almost all still on the land, at a density of around 1,500 per square mile (600 per sq km). Already the incidence of disease is rising in Java, and the



than 500 people per square mile (200 per sq km). Poverty, in other words, is not caused by too many people; it is the result of too little money.

Most Third World countries have not developed their resources and their people are not trained to exploit them properly. Most of their people, therefore, are poor. But the fact that their populations are growing rapidly is not the cause of their poverty. Apart from the Indian sub-continent, China, and a few islands in the Caribbean and Indian Ocean, Third World countries have very low population densities. Their only problem with population growth is the need to make their economies grow faster, so as to raise living standards. To a greater or lesser extent most of them are succeeding.

Only if they fail consistently do they start running into the classic Malthusian symptoms of overpopulation: famine, disease and chronic violence. It can happen at any population density—the question is not how many people there are, but how much food and other resources are being produced to support them.

The classic case of this in the modern era was Ireland. Like the rest of the British Isles, its population began to grow rapidly around

average food intake is falling; the physical size of the Javanese is actually decreasing. And when Malthus arrives this time, scythe in hand, there will be no escape through emigration.

Fortunately, there are very few places like that in the world. A more typical pattern is that of Mexico or Brazil, where the population is exploding—3% growth a year—but where the economy is expanding even faster new lands are being opened up, and the population growth is going into the cities. (Mexico City, Sao Paulo and Rio will be first, third and sixth in size amongst the world's cities in 2000)

This kind of growth is so fast it's frightening, and as always the experiences of first-generation city dwellers straight off the land are grim. But it actually resembles the experience of the US between 1850 and 1900, when the population more than tripled and New York became the world's biggest city.

The present cycle of world population growth will create a few horribly mutilated casualties in the Third World, just as it did in Europe in the last century. Most countries, however, will come through it without a disaster.

Gwynne Dyer, London

Here's How

TO DRESS FOR AN INTERVIEW

Going for an interview? Here's wishing you good luck and confidence from Blossom Kochar, a highly qualified and well-known beautician of Delhi. Well-groomed hair and right clothes go a long way in making a good impression on the prospective employer.

Women

Hair: Exotic or overdone hairstyles are absolutely wrong. Hair must lie in place without requiring constant attention. While going for an interview, avoid extremes and wear your hair in a simple, well-groomed style.



Wearing the 'wave' for efficiency.

Make Up: The guiding principle is to be natural. "Exaggeration is a sign of bad taste." While going for an interview, use only *kaajal* and very little of any other make-up. Your lipstick should not stand out in any way. Bright red colours, which blend with the complexion and do not give you an overdone look. Eye-shadow should not be used as it gives an over-made-up look. But if you must use it, use only a very thin line. Eye liner is also out for the same reason.

Nails: Very long fingernails and false eyelashes should be avoided. Use only colourless nail polish for your fingernails.

Mascara: Mascara should also be used with great discretion. Your eyebrows should look as natural as possible. If you have pale eyebrows, they can be darkened slightly with a pencil.

Perfume: If you want to wear it, wear a delicate and expensive one. But, if others know you are wearing it, then you are wearing too much.

Jewellery: The lesser the jewellery worn the better. It should be functional and should add to your personality. A watch, a simple ring and simple gold earrings are usually enough. Dangling earrings are not for interviews. In fact anything that clangs, bangs or jingles should be avoided.



A riot of curls gives a frivolous look.

Dress: You can wear any dress that you like—sari, Punjabi outfit or a dress. But avoid loud floral prints. Wear solid colours. Stripes, checks, paisleys can also work well. The colours that tested best are: deep blue, navy blue, tan, beige, dark brown, grey and light grey, rust, and medium blue. Colours that tested poorly are: green, purple, orange, baby blue, pink, bright red, lavenders, bright yellow or light rust. Avoid materials that cling, shine or make a noise when you walk. Also avoid halter necks and clinging sweaters and dresses made out of denim or corduroy. In winter, woollens should match your dress. A beige coat, shawl or cardigan blends with your personality and does not distract from it.

Men

A man must learn to use clothing as a business tool. A young man right out of college going for his first or second interview, has limited resources and his wardrobe suffers accordingly. But large wardrobes or expensive wardrobes are not the real issues. The right colours, patterns and styles are very important. If a man has only one good suit, it should be of a dark blue shade. If you can afford a second one, it should be in grey pin stripes. These suits and appropriate shirts and ties, should be able to "get you through" most interviews. Dark blue is the best colour. In summer, a safari suit in light blue shade can also be used. But, a dark blue pant, a light blue shirt and a maroon tie look more effective than a safari suit.

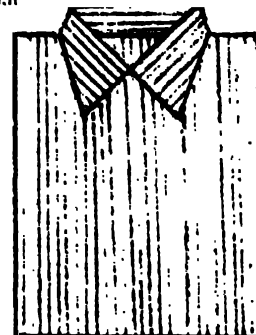
Coordinating clothes: When coordinating clothes, the colours, lines, textures and style must be considered. In choosing colours men make two basic mistakes. They either wear colours that clash or colours that are monochromatic (all in one shade). For example a light grey suit with a pale blue shirt and pale blue tie is an example of colours that fade, while a green shirt with a blue suit and an orange tie is a clash of colours.

The lines of any garment are the directions in which the pattern runs. A pinstripe suit has a vertical pattern. A check suit has a vertical and horizontal pattern. A paisley tie has a non-directional pattern. When putting clothing together it is very important that a pattern that travels in one direction is not put next to a pattern that travels in another direction. The lines are bound to clash.

Texture is often overlooked, but it can be used to match materials with very pleasing results. For example, a nice heavy wool tie with a heavy flannel suit or a linen tie with a linen

suit are good texture combinations. An example of clash of textures is a silk tie worn with a flannel suit.

All items of clothing have a definite style. For example, a pinstriped suit gives a conservative business-like look and it would be a clash of styles to wear a sporting shirt with a pinstriped suit. Similarly, a narrow traditionally patterned tie would look silly if worn with a wide laped suit. So the combination of styles must be appropriate.



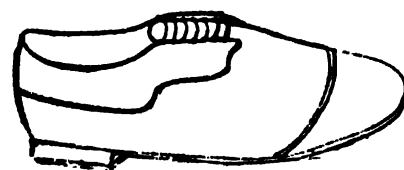
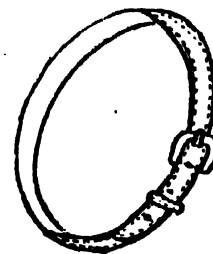
The pin stripe look for all reasons.

The simple, effective and acceptable combination of clothing is in solid colours. Remember to keep one of them very dark or in contrast, so that your outfit does not look dull. For example, in a blue suit, a white shirt and a maroon tie, you will project a sharp, fashionable look.

Haircut: Hair should be cut neatly; facial hair should be kept well trimmed and well shaped. Your hair must be well combed and your shoes must be polished.

Jewellery: Stay away from identity bracelets. They should be chosen very discreetly and must be expensive if you must wear them. The only completely acceptable ring is the wedding ring/band. Gift links should be simple and small, never large. If you must wear stones, wear real ones.

Big, heavy and ornate buckles tend to be



One, two, buckle and shoe.

unacceptable. Small, clean, traditional buckles with square lines are best. If you have to carry a briefcase, it should be in a dark rich tone of brown leather. Black and grey briefcases do not look very businesslike. Acceptable colours of shoes are black and brown. The plain lace shoes are the traditional footwear that always look smart.

J. K., New Delhi

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CARTOONS



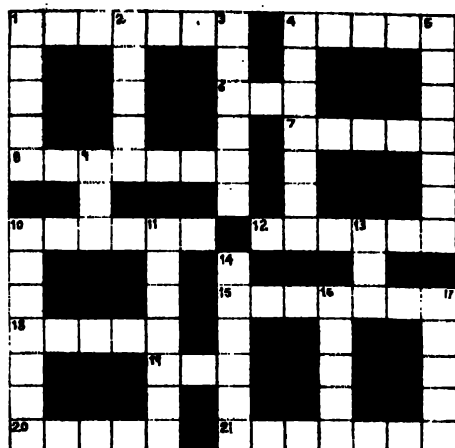
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BY RANI P. SOMAN

WIN RUPA PAPERBACKS



ACROSS

1. ---and Sabra, the two refugee camps where hundreds of people were massacred in Lebanon (7).
4. Was used as a currency in Siberia even in the 1890s (5).
6. A Japanese Buddhist sect which holds that the truth is not in scriptures but in man's own heart if he will but strive to find it by meditation and self-mastery (3).
7. A --- clover means a white clover; a --- comfort means 'Thank God it's no worse'; a --- liquid is ethylene dichloride ($C_2H_2Cl_2$) and double --- means any unknown language (5).
8. A purple flowered clover-like plant, introduced into Mexico by the Spaniards and now extensively cultivated in the US for hay and as soil enricher (7).
10. City of Apulia, Italy, contains the now ruined castle of Emperor Frederick II. In World War II it was a leading German air base and was thus subjected to heavy Allied attacks (6).
12. In music, a succession of notes, memorable as a whole. Pitch and rhythm are its fundamental elements; along with harmony and counterpoint, it is often defined as a basic dimension of musical form (6).
15. Spanish painter, sculptor, aphic and ceramic artist; best known is his mural *Guernica* expressing his loathing of fascism and the horrors of war (returns) (7).
18. An Arab leader of great influence, invested with powers akin to that of a Messiah in the Mohammedan mind. Mohammad Ahmed, who overran the Egyptian Sudan and captured Khartoum took this title (5).

SPORTS QUIZ GOES

Dear Readers,

With this issue, we are replacing the SPORTS QUIZ with an exercise more tricky, more infuriating, more puzzling, more fun. Each time there will be a new twist, a new angle to it. We hope this will sharpen your reasoning and at the same time bring you greater enjoyment.

is named after him (5).

21. The Englishman who invented the tank in 1914 (7).

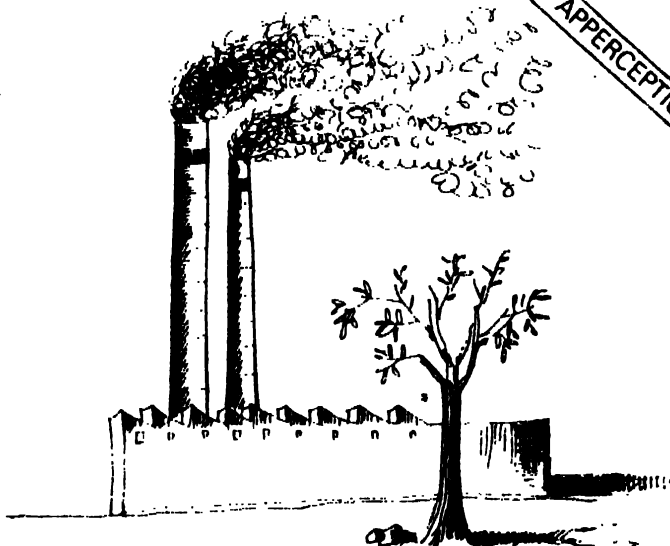
DOWN

1. The Parliament of Afghanistan (5)
2. The eighth (originally ninth) letter of the Greek alphabet (5)
3. Capital of the Union territory of Mizoram (6)
4. A deeply cut collar similar to those seen in the portraits of a great Flemish artist; a short pointed beard called --- beard, also --- brown, a colour used by the painter (7)
5. Chemistry in ancient times (7)
9. Concentration of water particles in the air close to the earth (3)
10. British scientist whose invention of the radio valve in 1904 revolutionised radio

quality speech and even vision signals which led to broadcasting and television (7).

11. One of the foremost architects of ancient Greece. Most famous, along with Callicrates, as the architect of the Parthenon which is considered to be the crowning achievement of the Greek architectural genius. Also built Temple of Apollo Epicurus at Bassae (7).
13. A fierce sea-monster, a killer whale (3).
14. The Parliament of Spain (6).
16. An inert gas discovered in the atmosphere by Rayleigh and Ramsay in 1894 (5).
17. US physicist who invented short-exposure X-ray radiation and originated many devices important to telephony and telegraphy. His several books include *Immigrant To Inventor* which was awarded the Pulitzer Prize in 1924 (5).

OBSERVE & DESERVE



A LAW DISTORTED

Here's an intriguing quiz to test your intelligence. Study the illustration carefully and see if you can spot where the artist GOPI GAJWANI went wrong with his brush. We hope it won't leave you grooping in the dark for long. Spotted the error? Just mail us your answer in **not more than 20 words**.

The rules, etc., are the same as those for KENWORDS. Its entry coupon is marked — 'Apperception Test COUPON'.

PRIZES

KENWORDS-43:

2 First Prizes

The Complete Short Stories Of De Maupassant from **Rupa & Co., New Delhi** to the first two **all-correct** entries (or **one-error** entries if there are no all-corrects) pulled out of the hat

Plus 5 Consolation Prizes—Collins General English Dictionary from **Rupa & Co.**

APPERCEPTION TEST

7 First Prizes

An exciting package of books worth Rs. 50 each from **Rupa & Co., New Delhi** to the correct entries pulled out of the hat

For How To Enter and solutions to April issue's contests, turn to page 74.

**Kenwords
Coupon**

**Apperception Test
Coupon**

HOW TO ENTER

● Print the answers neatly in capital letters alongwith your name, age and address. Each crossword must be pasted/clipped to a larger piece of paper.

● You may send in any number of entries, but each must be numbered accordingly and accompanied with its respective COUPON.

● Though all your entries will be included in the draw of lots, you will be entitled to only one prize.

Closing date for the two contests: June 25.

Address your entries to: The Editor, Career & Competition Times, 10 Daryaganj, New Delhi-110 002.

Solutions to this issue's contests will be published in August.

SOLUTIONS SOLU

KENWORDS-41

Across: 2. Descartes 6. Horse 7. Knout 8. Ushuaia 10. Ampere 11. Kopeck 14. Dadaism 17. Eider 18. Smith 19. Pasternak

Down: 1. Jharkhand 2. Decatur 3. Sirius 4. Arrah 5. Ennui 9. Arkwright 12. Obelisk 13. Amazon 15. Agana 16. Image

Winners

First Prize (all-correct): 1. M. Madhusudana Sarma, Anantapur (Andhra Pradesh). 2. Sudeep Kumar Lahiri, P.O. Hooghly.

Consolation Prize (all-correct): 1. Vandana Singh, Lucknow. 2. Shardendu Shekhar, Patna 3. Namgyal Dorjee Khangserpa, Chandigarh. 4. Bommineni Bhaskar Reddy, Hyderabad. 5. Upendra Raywat, New Delhi.

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SPORTS QUIZ-41

1. Jehangir Khan
2. It was the first in 112 Tests for West Indies. They last lost by an innings in 1968-69
3. Nandan Bal
4. Services
5. Syed Modi
6. 68 by West Indies vs Pakistan at Bridgetown, 1976-77
7. Bapu Nadkarni against England at Madras, 1963-64. He bowled 21.5 overs (131 balls) without conceding a run.

Winners

First Prize (one-error): 1. Sadhana Roy, Calcutta. 2. Abhijit Kumar, Murshidpur.

Consolation Prize (one-error): 1. Nasir Ahmed Bakshi, Srinagar. 2. G. Ganesh, New Delhi. 3. Rajesh Kalla, Srinagar. 4. Rajendra Prasad Bhatt, Pantnagar. 5. Lalit Kumar Saraf, Ranigarh.

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FROM THE CLUB DEB

Now that university exams are coming to a close, a sizeable number of CCTimes Clubs will be in for a busy session. Debates, group discussions, quizzes, cultural stunts, social service projects, sporting activities, trekking and mountaineering, personality development programmes, career banks... even inter-club activities could be arranged by the enterprising clubs.

Debating sessions could take off with topics like 'Commercialisation of the Idiot Box (TV) in India', 'Advertising in a developing country', 'Reserving seats for women in city-buses', and 'Video boom in India'. Groups could have discussions on issues like 'Should multi-national companies be banned in Third World countries?', 'Should India go nuclear?', 'Role of the police in the common man's life—saviour or destroyer?' and 'Are reservations a necessity or an evil?'

And now for some physical exercise. How about arranging trekking trips to the hills? The more adventurous could go higher up into the mountains—but with an experienced mountaineer as guide. Summer is the best time for such outdoor activities which will introduce you to qualities like team-spirit, self-confidence and adaptability.

We hope these suggestions will set the clubs thinking and help them come up with novel ideas. But don't forget to share them with us. Likewise, share your activities and please be more graphic when describing them. A mere listing gives no idea to the other clubs and us about the quality of the programmes. Unlike such clubs, the Wisdom Rendezvous Club from Hyderabad has been quite vocal in its very first letter. Since most of its members are appearing for GRE, GMAT and CAT, they hold plenty of vocabulary sessions. Just-A-Minute and reasoning tests are also part of their schedule as they know these help in performing better at interviews and tests. But their forte is group discussions (GD). They have asked for effective hints for a GD. Our advice to them—CCTimes has published mock GDs now and again alongwith an assessment. The latter should answer most of your queries. Lions Club from Sambhal (another new arrival) has also been very active. Last month they organised polio vaccinations for children of a nearby village.

CCTimes Club from Mahendru Mohalla, Patna, has asked for important points for a debate topic ('Preparation for war is the best guarantee for peace'). Sorry, points from us would defeat the very purpose of encouraging self-reliance in you. Your participants should prepare them from various sources like magazines and newspapers and have their efforts judged at the debate contest. The Thrill Seekers Club from Amritsar (henceforth to be known by its new name, Progressive Youth Association) has asked for a list of all CCTimes Clubs. Your purpose could be served through this very page where we have been publishing

the list. The Amateur Debaters' Club from Varanasi has come up with the unique idea of organising educational tours which could include visits to historical places in their city and even nearby towns. Or, nature tours, which could be conducted with the help of a botany teacher. Each tour could be followed by a report from every participant to see how much he or she has learnt.

CCTimes readers in Salem now have the chance to join a CCTimes Club recently opened in their city. The Club members could be contacted at 39-A, Chairman Thammannan Road, Salem-636 009. We'd like to mention at this stage that since our club mail is overwhelming it's not possible to correspond by post. So, please do not wait for a personal reply from us. Go ahead with your plans and keep writing to us about your activities. Your registration number will be given through these columns when we come to the letter 'S'.

It was nice to know that the Angels Club from Lucknow is already involved in social youth activities like teaching weak and financially poor students free of cost and providing them free books. They have their own library and football and cricket team. During this summer, they have planned to hold adult education classes in nearby villages.

This month, too, many readers have shown interest in CCTimes Clubs and would like to know how to go about setting one in their neighbourhood. V.K. Sunil Kumar from Hindupur has asked for an "application form so that he can be enrolled". CCTimes Club, Belur, a new arrival, has made a request for "our prospectus". Sanjay Sethi from Lucknow is disappointed that we haven't sent him the details on how to set up a CCTimes Club. Ashim Narang from Saharanpur has a similar complaint. Kaushlesh Saxena and friends are eager to set up a club in Faridabad. They are just waiting for our permission to go ahead. Vijayawada CCTimes Club is also waiting to hear from us to start their club. Finally, Sowmya Patel from Jabalpur writes, 'I want to join your club'.

Sowmya, you're most welcome to do so. All you have to do is contact a CCTimes Club in your town (address printed in our May issue) or set up one with your friends. Our last few issues should tell you how to set up a CCTimes Club. As there's so much to say, it's not possible to repeat the details every month.

Other readers, please note that you don't have to wait for our "permission" or a letter to begin your activities. Nor do we issue any such things as "application forms" or "prospectuses". Quizzes for details on how to set up a club will be taken up in these columns. Membership cards will henceforth be issued only to the President and Secretary of each club. Also, the names of members may not be sent to us, though you're welcome to tell us that your club's membership is growing.

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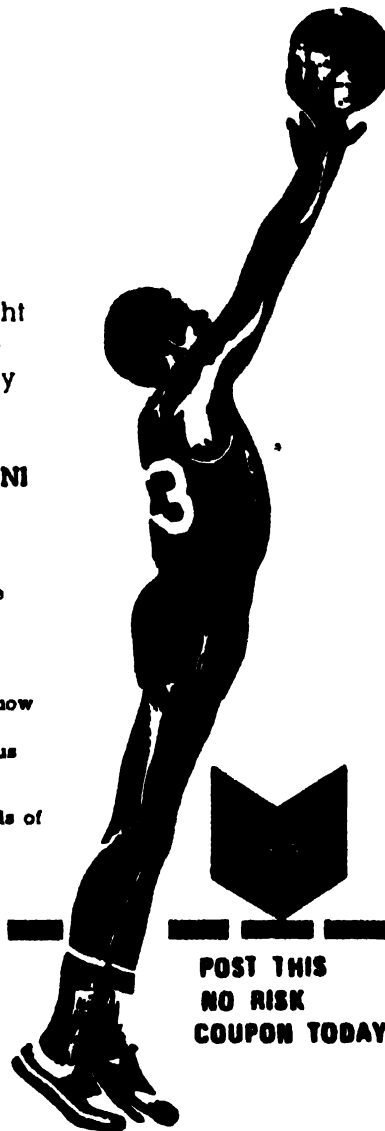
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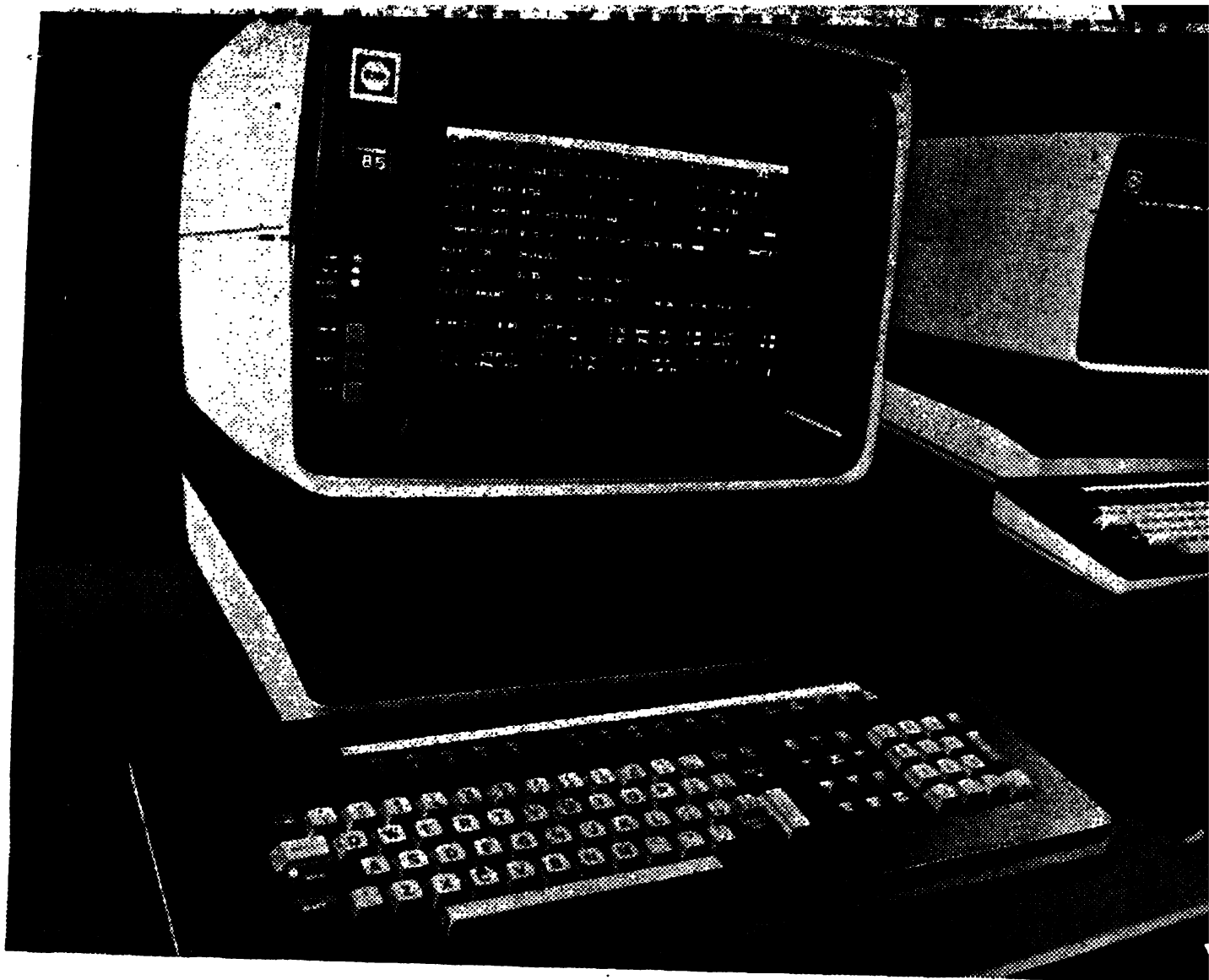
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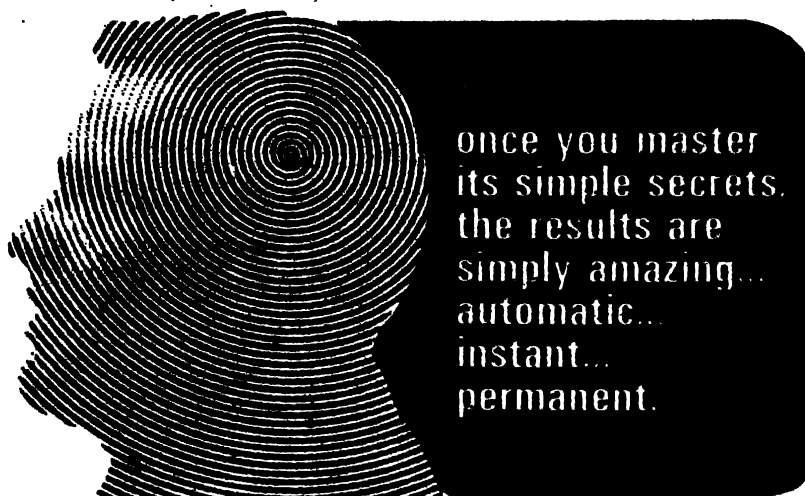
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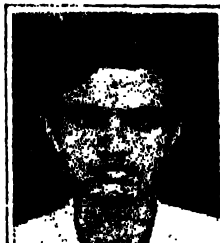
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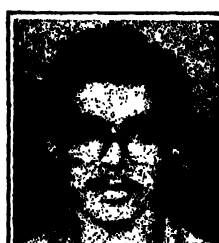
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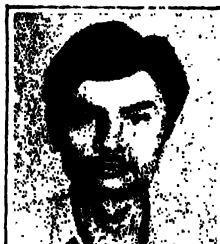
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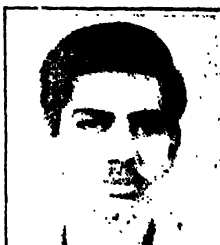
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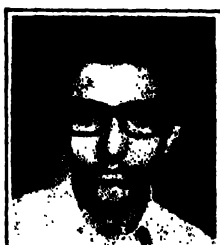
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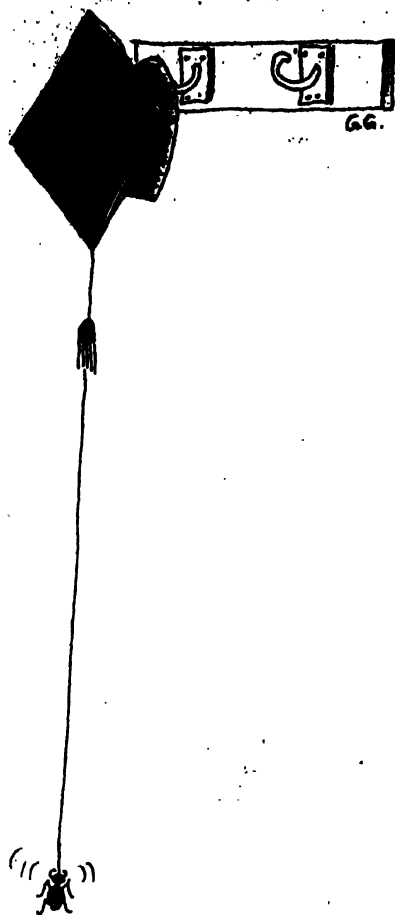


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A GROWING MENACE: Analysing the problem of population, history of population growth in India, its widespread ramifications, various theories of population and demography, economic aspects of the problem, religion and population and population control. ● **INDIA AND IDA:** The purpose and objectives of this international money-lending organisation, the numerous problems it faces, the role it plays in less developed countries and developing countries like India. ● **SCIENCE:** Tracing the history of space programmes. ● **EDUCATION:** Problems of higher education. ● **UTILITY OF MAPS-3.** ● **BETTER ENGLISH:** Teaching Composition-1. Plus our regular features.

LETTERS

Where's The Indian?

Khalistan for the extremists, Assam for the Assamese, Kashmir with its special status, Bombay only for the Maharashtrians and Tamil Nadu for the anti-Hindi Tamils! Where is the true Indian in India, please?

A.A. Tehrani, Madras

Best Letter: Rs 40

Congress (I) Pollution Control

During the centenary celebrations of the Indian National Congress, PM Rajiv Gandhi said that his party was like the holy river Ganga. Rajiv has already set up a board to purify the waters of the river Ganges. Will he, however, set up a board to control the pollution of Congress (I)?

S.K. Sinha, Patna

Prize-winning Letter: Rs 25

Sports Special

The *Care Issues-6* (May '85) which is devoted to sports, exposes some of the basic reasons for India's dismal performance in international events. Although India has a manpower of 700m, it could not win even a bronze medal. The government should reduce the importance being given to cricket, and provide equal opportunity to other games besides cricket. This might improve matters.

S.K. Mishra, Tarbha (Orissa)

The New Era

The criminals are upright and the cops prosecute. It is the dawn of Al Capone's era.

Suraj Shrivastava, Gwalior

Separatists

It is high time the Khalistan-worshipping separatists realised that there was no *Abali ahan* (empty place) for them in India.

D.K. Bhatt, Mathura

INS Centenary

In their inaugural address at the centenary celebrations of the Congress Party, political stalwarts eulogised the services rendered by the great leaders Motilal Nehru, Jawaharlal Nehru and Indira Gandhi. I doubt whether it was the centenary celebrations of the Congress Party or of the Nehru family?

Ratna Nambisan, Bombay

Living Up to Expectations

Who do you think lived up to George Orwell's great expectations?

The Union Carbide, of course!

M. Suresh, Bangalore

Whose 21st Century?

Much has been talked about taking the country into the 21st century (*India And The 21st Century*, May '85), while nearly half of our population is still living in the 19th century, without even the basic amenities like road, light and drinking water. The much-publicised computer revolution is of no avail to them.

A.K. Singh, Nilakheri

Scramble For Ph.D.

The UGC by stipulating that a college teacher

should have a Ph.D. degree has, alas, not helped to create research consciousness among teachers. In fact, the fall-out of this is the attempt to manage a Ph.D. degree by hook or by crook.

M.M. Sinha, Patna

Meaningful Education

With reference to *Education Needs Awareness* (May '85) some encouraging signs have begun to appear on the horizon of education.

K.C. Lal, Hazaribagh

Political Retirement

With reference to *Disability At The Helm* (May '85), physical and mental ability depends on age. If government servants are subjected to compulsory retirement, why not our politicians?

Subhas Mewar, Bombay

Whither Secularism?

The aftermath of the accidents in north India caused by terrorists makes me wonder whether Indian secularism is just a farce.

U.C. Pandey, Lucknow

Due to widespread terrorism in north India, if personal belongings, watches, radios, etc. are lost they might be found easily since no one would dare to touch them. Is not Gandhi's dream of Ramrajya coming true?

S.S. Khandari, Mussorie

Good Wishes From Rakesh

I wish to thank your readership for voting me as the "Successful Indian of 1984". I see it as an expression of the tremendous interest the youth of our country has in this science of the future.

Through your columns, I would like to convey my best wishes to every reader and hope that each one of them achieves excellence in the discipline of his/her choice.

Sgt. Lt. Rakesh Sharma AC

Asst Director Space Cell

Rich Man's Budget?

It is regrettable but true that the Union Budget for 1985-1986 is hardly better than the previous budgets. There is a noticeable lack of attention to the downtrodden. Abolition of CDS, TV and radio licenses, etc have nothing to do with the poor.

K.V.R. Murthy, Vizag

Rural Banking

Thanks to our government for opening new branches of nationalised banks in rural areas. Previously one had to leave one's village and come to urban areas in search of a job. Now, city-dwellers are coming back to villages for jobs.

Masud Raza, Meerut

Muslim Personal Laws

With reference to *Indian Constitution And Polity* (Apr '85), the author's remark "One really wonders as to how these (Personal Laws, etc) are related to the essentials of religion" seems a bit preposterous and biased. Everyone knows that the fountain heads of the Muslim Personal Law are the Quran and the Hadith; and they represent the social, cultural, economic and ethical fabric of Muslim society. In this regard, I may be allowed to quote Dr Rafiq Zakaria who recently opined—

"The Muslim Civil Code will be accepted by them (the Muslims) because the Personal Law is a part of their religion, their culture and their way of life."

Tariq Wajid, Aligarh

Banning Bureaucracy

We, the people of Democratic India, will be free from miseries only when we can abolish bureaucracy; because bureaucracy always precedes democracy in India.

Santosh Kumar, Patna

Talking Shops

The non-aligned nations' meets have become mere talking shops. These countries are hired by the superpowers to speak for them in different forums, which they willingly do with scant regard for the interest of the movement itself.

M.J. Lakshmi, Ch

Prerequisites Of Democracy

Democracy cannot succeed in a country where people have no national character.

Anand Mukherjee, Satna (MP)

Blocking Development?

As is being observed, particularly in the implementation of various agricultural and rural development schemes enunciated for national welfare, the block development machinery seems to be blocking development itself.

Abdul Rahman, Dhansura Kalan (UP)

Reservation Hils

India is a developing country. Year after year if the government increases the number of reserved seats for backward classes, it will hinder the country's progress.

Dulal Talukdar, Barpeta (Assam)

Only strong will power and firm determination can lead us to our destination in this competitive world. Reservation merely weakens our will power; it is not a panacea for backwardness.

Amarnath Upadhyay, Patna

Is my mother country sleeping in the hall of reservations? If so, when will she wake up to the call of equality?

V. Rangaswamy, Madurai

One cannot say that reservations, on the whole, ought to be abolished. The basic problem is economic. The backward classes have been living under upper class domination for years together. After independence, the economic aspect has not changed much. All the gains of material progress have been grabbed by the upper classes, who have wielded power prior to independence. Progress has failed to touch the bottom rung, mainly constituted by the backward classes. How can one expect these people to uplift themselves socially when economically they are no better off than they were 50 years ago?

N.R. Hatakar, Wai (Maharashtra)

An Oversight

In the June '85 issue, the article, *Economy: Towards Denationalisation*, was written by Rajendra Mathur, editor *Navbharat Times*.

Caution Please!

If you want to drink like a fish, well, drink but drink what the fish drink.

Qasim Nazim, Parbhani

Hello folks...



As soon as they reached Rashtrapati Bhavan the two Presidents sat down to coffee in the Morning Room. After a few pleasantries, Brezhnev remarked through an interpreter: "Mr President, you have been an Ambassador in Russia and you said you liked the country. Why have you not come again in spite of many invitations extended to you?"

Radhakrishnan replied: "I am sorry. I have been too busy. You know after I left Russia my wife expired and, therefore, I have not been able to come."

Brezhnev: "But it is quite some time, and now you have time. I am sure we shall not have to reprimand you for not coping with our invitation." Perhaps the interpreter had translated Brezhnev wrongly, but the word "reprimand" seemed to nettle Radhakrishnan. Contracting his eyebrows and with a hint of tartness in his voice, he replied: "I will come to Russia only when I am sick. You have nice hospitals there." There was perhaps no further talk about a visit to Russia during the rest of Brezhnev's stay in New Delhi.

On Mar 1, 1961, on the eve of Queen Elizabeth II's departure from India, Mr Baig, the Military Secretary, happened to mention that Dr Rajendra Prasad was writing his autobiography and added, turning to the Queen (Elizabeth II): "After your Majesty's visit is over the President is adding another chapter to his autobiography."

"Really?" asked the Queen quickly, looking at the President. "Yes", replied the President, "I have been able to write some chapters already."

"How many have you written?" the Duke asked.

"About 1,200 pages," the President said.

"Oh, where did you get all that time?"

the Queen interjected.

Once again, quietly, the President said: "Your Majesty, I have been writing for a very long time. Don't forget I was in your father's jails for 16 years. There was plenty of time to write in jail."

The silence that followed was deadly. The listeners were struck dumb. Their minds were numbed.

These are real life stories (from Maj C.L. Dutta's book *With Two Presidents*) indicating the type of damages words can do to international relations. If Brezhnev and Radhakrishnan would have been more discreet in selecting the words and expressions used by them, the personal relationship between the two heads of State would have been more cordial and warm. Brezhnev could have said: "Mr President, we miss you very much in Russia—the country and the people you like immensely. When can we expect you? It is a long time since you visited our country."

Then when he was told about the death of the President's wife, he should have expressed his profound sorrow and told Radhakrishnan: "We were sorry to know about that, Mr President. However, time is a great healer. Our people reprimand us presuming that we perhaps are not extending warm invitations to you. Do save us by accepting our invitation." Radhakrishnan would never have refused the invitation.

Again, Dr Rajendra Prasad need not have emphasised that he was in the Queen's father's jail for 16 years. Many a time, harsh truths can be camouflaged in softer expressions and much more can be achieved.

Here's another story where carefully selected words and expressions saved a difficult situation. This happened in a small city in Rajasthan in the early '50s. Students in a government college were on a prolonged strike and local authorities were unable to handle the situation. Ultimately the Director of Education had come to talk to the students. He sent a message through the principal asking the students to come to the Circuit House to meet him. The students felt insulted as they did not receive any letter and refused to go to the Circuit House. The Director's secretary undertook the responsibility of bringing the students to the Circuit House.

The same evening a smartly dressed middle-aged man was talking to the striking students.

"What is the matter?" he asked.

"We have certain problems and nobody cares to listen to us," the crowd told him.

"But the director is in town. I am told. Why don't you talk to him?"

"Why should we go? He sends oral messages through the principal and does not write a letter," the infuriated students replied.

"You are fools. You are not accepting the invitation extended through the principal but a letter written by his clerk would be acceptable to you."

Next morning the students were in the Circuit House to meet the Director.

Several examples can be quoted to show the kind of havoc words can play and also the wonders they can achieve. In real life, you have to establish long term relations and get your work done not once but time and again. Your strategy should be to create a warm and friendly environment. Whatever you want to say, can be said with a smile and the words used may induce a person to do your work. It is necessary to prepare a background and not use an expression abruptly. If you think that the person may feel offended and might refuse to oblige you, then you may put forth the idea in such a way that the person does not immediately say no. For example, you can say: "I know it is difficult to do this work. However, I will appreciate if you can help me because if this is not done I may be in great trouble. If it is not possible to do it immediately, do it in the near future."

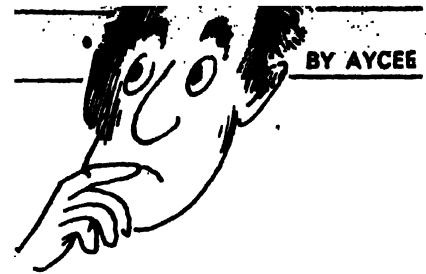
In brief:

- Choose words carefully and appropriate to the occasion
- Select words which do not offend the person.
- Do not use words which undermine the authority of the person like, "See to it that it is done by tomorrow!" A better way of putting it would be—"I will be happy if you can do it by tomorrow."
- Do not offend the person in any way.
- Do not use strong words.
- Do not come to the subject immediately.
- Do not insist on getting a firm commitment from the person.

Remember, words can be used as bouquets as well as bullets.

Radhakrishnan

TEST YOUR WORD POWER



The per-fect WORD. Is it on the tip of your tongue or is it hidden in the back of your mind? Either way, we agree, it's an eloquent problem.

And so each month we bring you this column, tailor-made to suit your requirements. Twenty new words complete with their meanings and usage.

But what's so unique about our word power exercise? The 20 sentences are information-packed and fact-laden—facts which are often not easily available. A weighty two-in-one package, wouldn't you agree?

Tick the word or phrase you believe is *nearest in meaning* to the key word:

- 1 **arduous**: A: brave B: passionate C: difficult D: hateful
- 2 **brash**: A: worldly-wise B: strong C: harsh D: aggressively self-assertive
- 3 **bully**: A: a tramp B: one who lisps C: a giant D: person who uses his power to frighten those who are weaker
- 4 **commemorate**: A: to honour the memory of B: decorate C: deliver an oration D: expand
- 5 **connote**: A: to suggest in addition to the fundamental meaning B: doubt C: state the obvious D: make up for
- 6 **culminate**: A: to come to a final result B: bring to an end C: lose shape D: collect into a round mass
- 7 **devout**: A: head of a religious meeting B: earnestly religious C: suspicious D: excessively enthusiastic
- 8 **hoist**: A: to raise aloft B: entertain C: turn D: whistle
- 9 **lofty**: A: heavenly B: high-strung C: of great height D: multi-dimensional
- 10 **lure**: A: to tempt B: pull with effort C: unit of money D: mislead
- 11 **maverick**: A: gypsy B: a non-conformist C: an undomesticated animal D: criminal
- 12 **pest**: A: infectious thing B: sticky substance C: troublesome thing D: favourite thing
- 13 **primate**: A: the leading performer B: highest order of mammals C: the most perfect thing D: the most important person
- 14 **psyche**: A: mental illness B: spirit or mind C: supernatural power D: queer act
- 15 **reminiscent**: A: small part that remains B: wistful longing for C: suggestive of D: having regrets for
- 16 **resonate**: A: to produce an echo B: be certain C: oppose D: answer back
- 17 **rigid**: A: old-fashioned B: strict C: peculiar D: strong
- 18 **subtle**: A: poised B: difficult to perceive C: quiet D: feeble
- 19 **traverse**: A: to pass through B: encroach C: cut short D: go back over
- 20 **wares**: A: scientific instruments or tools B: clothes C: vehicles D: goods for sale

(Answers on page 59)

THOUGHTS

Here's some food for thought... provided you pause to ponder over it. These passing thoughts on various social, political and economic issues, expressed by a few observant minds, often portray the bare realities of life. They may even set your thought processes in motion!

Political reality requires that both sides exercise a spirit of compromise and moderation. The opposition should not expect overnight triumphs nor should the government overreact to legitimate challenges.

Newsweek

Every team to be effective has to have one leader even if he is merely the first among equals

Businessworld

No civilised society can tolerate virtual gangsterism masquerading as

trade unionism which had earlier inhibited action in a number of cases (on the DTC strike).

Indian Express

...no state is ever a neutral agency. It consists of human beings who have their own predilections and interests.

...whatever the popular language of Indian politics, socialism has not been the issue in India...growth has been and remains India's central problem.

Modern technology flourishes only in conditions of great flexibility.

Girilal Jain, *The Times Of India*

Stranglehold on information is completely antithetical to the spirit of participatory democracy, for it leaves people in no position to make informed choice.

Thirty per cent of the fruits and vegetables produced in the country is wasted due to poor post-harvest handling and inadequate facilities for processing.

Whereas until 1970 there were hardly one million hectares under irrigation, about two million hectares were being added per year since 1971.

Manmohan Singh, Deputy Chairman, *Planning Commission*
West Germany's Central Agricultural Marketing Board announces, hopefully, that "on the desk of a manager under pressure, the glass of whisky has been replaced by the glass of milk". If true, this is presumably to ease his ulcer.

The Economist

By-elections are like a mere sentence in a book. A sentence may be badly phrased here and there, but that does not take away from the merit of the book.

Srikant Verma on the results of April by-elections
Rajiv Gandhi does not count in local elections.

Bal Thackeray

QUOTABLE QUOTES

I claim not to have controlled events, but confess plainly that events have controlled me

Abraham Lincoln

New opinions are always suspected and usually opposed without any other reason but because they are not already common

John Locke

So the lively force of his mind has broken down all barriers, and he has passed far beyond the fiery walls of the world, and in mind and spirit has traversed the boundless universe

Lucretius

I heard a thousand blended notes, / While in a grove I sat reclined, / In that sweet mood when pleasant thoughts / Bring sad thoughts to the mind.

Wordsworth

I have nothing to declare except my genius

Oscar Wilde

I disapprove of what you say, but I will defend to the death your right to say it

Voltaire

I frequently tramped eight or ten miles through the deepest snow to keep an appointment with a beech tree, or a yellow birch, or an old acquaintance among the pines.

H.D. Thoreau

I am positive I have a soul: nor can all the books with which materialists have pestered the world ever convince me of the contrary

Lawrence Sterne

There are so few who can grow old with a good grace.

Sir Richard Steele

IN SEARCH OF FREEDOM

BY SANJUKTA BANERJI

Violence has been part of Namibia's daily experience for a long time. In the 40 years of German imperial conquest, the Namibians were forcibly dispossessed of their land and cattle and 80,000 people perished. During World War I, the land came under Allied occupation but the situation did not improve. In 1920, the country became a mandated territory under the supervision of South Africa and the latter dug in until it has now become very difficult for the Namibians to extricate themselves from the South African clutches. Today, 1,10,000 Namibians work as 'contract-labourers', separated from their wives and children, living in overcrowded 'bachelor' apartments. According to UN figures (1980), while Namibian whites enjoy a per capita personal income of 3,000 rand, the blacks get only 125 rand, the ratio being 24:1.

For the last 40 years, the UN has been waging a 'cold war' with South Africa to free Namibia, which was earlier known as South West Africa. Initially it tried to bring the territory under UN trusteeship, but South Africa refused to part with it. UN pressure increased after 1960, when 16 African nations became independent and joined the UN. In 1966, the UN revoked South Africa's mandate and technically brought Namibia under its administration. This, however, was only on paper, since South Africa still has full control over the administration at the top, though it has been careful in recent times not to reject the idea of Namibia's eventual independence. From the course that it has been taking, it appears that it is more interested in a rule by its own puppets in Namibia, and the passing of a Unilateral Declaration of Independence (UDI), as was declared by Ian Smith in Rhodesia in 1965, confirms this. The one complicating factor in the Namibian tangle is the South West African People's Organisation (SWAPO) which was formed in 1960 to fight for Namibia's independence and which has been fighting a sporadic war with South Africa since 1966, a war which has become more urgent with the independence of countries to the north and east of Namibia. To make matters worse for South Africa, the UN General Assembly called the SWAPO the true representative of the people of Namibia in 1973 and three years later it conferred on the Namibians the right to achieve independence by using any

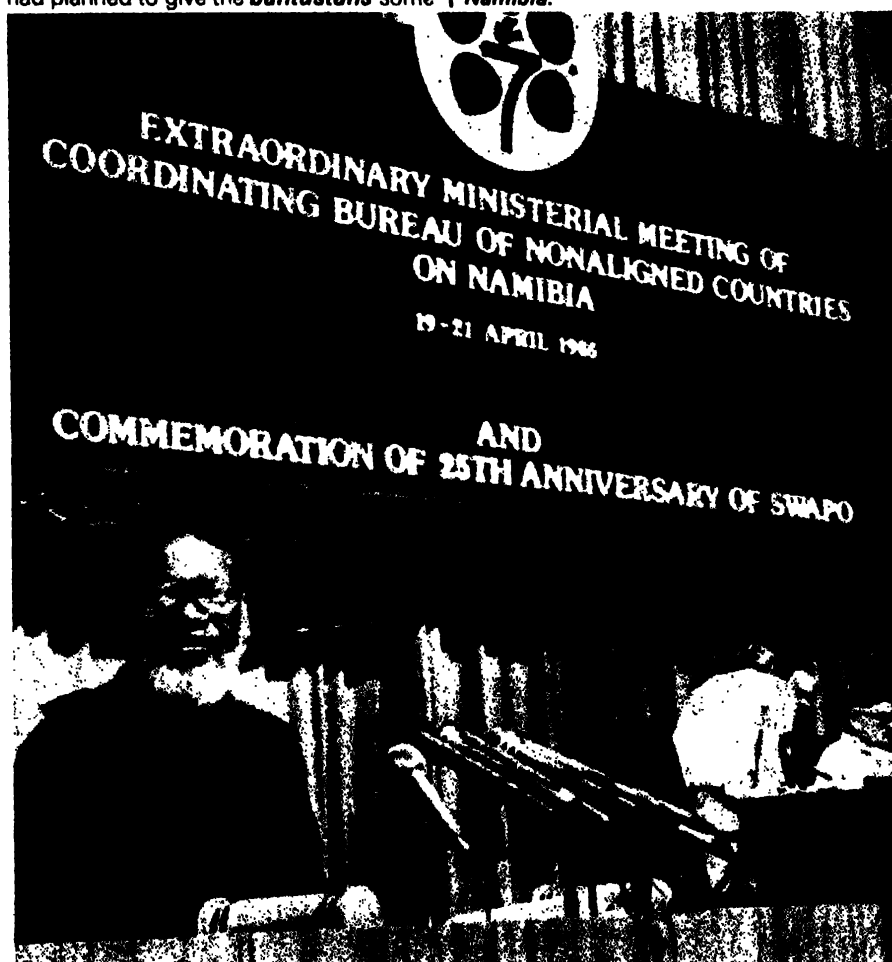
means. This sparked off a total bush war between the SWAPO guerillas and the South Africans, with the guerillas of the front-line states—Angola, Botswana, Mozambique, Tanzania and Zambia—joining the battle on the side of the Namibians.

South Africa's main concern now is that SWAPO should not take over power in an independent Namibia. It has, in fact, been trying to find puppets for the last seven years in the traditional tribal leadership as well as among the whites. In this period, its aim has also been to win over the people of Namibia through superficial reforms to give the impression that South Africa has good plans in the offing. The Pretoria regime, in pursuit of the aim of some sort of 'internal settlement' for Namibia, had set up *bantustan* (homeland) governments in the country for various ethnic groups, as early as the 1960s. It had planned to give the *bantustans* some

sort of self-government at a later date, but the great contract workers strike of 1971 and the total boycott in August 1973 of the *bantustan* elections in Ovamboland completely destroyed the credibility of this programme.

Next, South Africa went for a formula that would give the Namibians some semblance of power while leaving the ultimate control of the territory in the hands of Pretoria. In 1974, it called a conference of ethnic groups at Turnhalle to discuss constitutional options for Namibia and an interim Constitution was produced which was meant to be the base for an 'independent' Namibia. What it actually did was confirm the existing local authorities and *bantustan* governments and introduce a new third tier of authority at the national

Seeking freedom: SWAPO President Sam Nujoma at the NAM's New Delhi meet for Namibia.



composed of nominees from each of the group which had very little real power.

The international community found the interim scheme totally unacceptable. Meanwhile, the UN Security Council had passed its Resolution 385 which envisaged UN-supervised elections leading to the independence of Namibia. In 1978, the UN General Assembly Resolution 435, which is now regarded as the final resolution, was passed. This set the scene for UN-supervised free elections in the country. In 1977, the Western powers, the US, Britain, France, West Germany and Canada—each of whom has major commercial interests in the region—set themselves up into a 'contact group' with the aim of negotiating with the SWAPO, South Africa and the frontline states. It wanted to persuade Pretoria to accept the UN election plans but South Africa's main objective of setting up a client regime in Namibia remained unshaken. They did hold elections, but intimidation was used to such an extent that the UN declared it null and void. However, after the elections, the winners, the Democratic Turnhalle Alliance (DTA), a conglomerate of puppet parties backed by South Africa, was installed as an interim government in Namibia.

In May 1979, the South Africans delegated wide powers of self-government to the Constituent Assembly and renamed it National Assembly. Later, in 1980, more constitutional changes were brought about creating a pyramidal structure of institutions with South Africa at the top of the structure, retaining full control over foreign affairs, planning and defence. Local institutions were established but these had deep ethnic and racial divisions. However, to give the semblance of more reforms, an independent civil service was created and a Government Service Commission was set up. But Pretoria was the puller of strings because the Namibian Administrator General was totally under its control and the Administrator General's Advisory Council, which was Pretoria's version of a Cabinet for Namibians, had strictly limited powers. In this period a South West African defence force and a South West African police force were also created to give the impression of reform, but this experiment had to be abandoned in 1982 when the DTA split. South Africa again took over all formal powers.

Recently South Africa has presented another plan for interim government in which all internal parties would be represented, except SWAPO. South Africa will, however, retain direct control of foreign relations and defence and the Administrator General set up by Pretoria and local legislation passed by the interim government. This has created a

furor in the entire non-aligned world which held a meeting in New Delhi recently, where the South African move was roundly condemned. The UN Security Council too has declared the South African move to be null and void and has rejected any unilateral action of South Africa leading towards an internal settlement. What is significant is that even the US, Pretoria's strongest ally, has dubbed the move null and void and has accused Pretoria of holding in 'disregard' Namibia's demand for independence.

Another dimension, however, has been added by US views on the subject, which make its declarations suspect. America wants to link the issue of the independence of Namibia with the withdrawal of Cuban troops from nearby Angola. Last year, the Americans helped to bring about an agreement in Zambia between South Africa and Angola to establish a joint monitoring commission based in southern Angola to stop SWAPO guerrillas from making trouble. The South Africans have agreed that if Washington really could deliver a Cuba-free Angola, they would compromise on UN Resolution 435 in Namibia. For tying decolonisation to an explicit interference in the affairs of a neighbouring state, America was denounced not only by other African leaders, but also by the other members of the contact group. It almost appears that the US is more interested in promoting cold war problems in the region rather than solving the colonisation problem.

With regard to the colonisation problem, one reason that excessive efforts may not have been made by the contact group is that each of the countries involved has excessive commercial interests in the region. Namibia is rich in mineral resources—copper, tin, lead, uranium, zinc, silver, tungsten and diamonds—and is potentially one of the wealthiest countries in Africa. Multi-national conferences extract vast profits and 75 US-based firms are doing brisk business in Namibia in blatant violation of UN-imposed sanctions. In addition, there are 68 firms from UK, 25 from West Germany, 19 from South Africa, 12 from France, 10 from Canada, five each from Japan, the Netherlands, and Switzerland, four from Italy, three each from Austria and Norway and one each from Israel and Portugal, who are doing business with South Africa. In fact, the Western countries are too deeply involved with South Africa and the proceeds of apartheid to take strong action against it.

The situation as it now stands is that SWAPO wants Namibia free under the terms of UN Resolution 435, which calls for elections which the SWAPO reckons it can win. Before granting independence to Namibia, the South Africans have said that

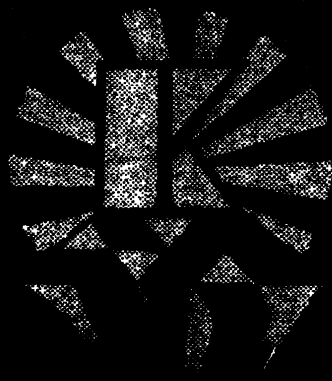
they want some sort of promise by Angola to send home the 25,000 Cuban troops which are protecting the government of President dos Santos against attacks by the South African-backed Unita guerrillas. In Namibia, meanwhile, it wants to keep the SWAPO out of power, and has been promoting a client regime. Its basic fear is that if SWAPO were to take over power it would have an unfriendly neighbour, which could provide a haven for those who rebel against the apartheid regime in Africa, like the guerrillas of the banned African National Congress (ANC) for example.

With the Western countries allowing matters to take their own course, the SWAPO has its main friends in the Non-Aligned Movement (NAM), which has committed itself to end colonialism and racism in the world. At the extraordinary ministerial meeting of NAM held in New Delhi in April, India and Iran accorded diplomatic recognition to SWAPO. The member-states also promised all possible "diplomatic, military and material" assistance to SWAPO and sought to reactivate the Security Council on the Namibian issue. NAM rejected the linkage of Namibian independence to withdrawal of Cuban troops from Angola which it said was converting a decolonisation problem into a East-West issue. With NAM taking so much interest in Namibia, the Western countries may find it difficult to shield South Africa with vetoes in the Security Council, as they have done in the past. If the NAM action can bring positive moves from South Africa, Namibia may finally see real freedom, not just tutelage under South Africa. ■

SUMMER OF '85

The year 1985 may well turn out to be the warmest since 1851 in the entire Northern Hemisphere—thanks to the excessive ultraviolet radiation from the sun. Research has revealed that this unusual emission is being caused because of damage to the ozone layer of the atmosphere which normally filters ultraviolet rays reaching the earth. But nature itself cannot be blamed entirely. Man himself has contributed to this rise in temperature through deforestation and construction of cities. And in India, overpumping of underground water in central India and the Malwa plateau has even resulted in change in the nature of soil. Not only this, the damaged ozone layer coupled with an increase in atmospheric carbon dioxide which traps infra-red radiation has also affected volcanic activity to a large extent. And once again man has a hand in increasing the carbon dioxide content through industrialisation and forest felling. As a result he will have to sweat it out this year!

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ECONOMY

SIXTH PLAN: AN ASSESSMENT

S. R. M. BHATIA

The Sixth Five-Year Plan has ended on a highly optimistic note. Indian economy in 1984-85, the closing year of the Plan, was in a reasonably strong position. The growth rate of Gross Domestic Product (GDP) was around 4% in 1984-85, but this was over the high base of 7.4% growth rate in 1983-84. Over the five years of the Plan period, the annual growth rate of GDP is likely to equal the Plan target of 5.2%.

An important contributory factor to the success of the Sixth Plan is the performance of the agricultural sector in the last two years of the Plan. Agricultural production which had practically stagnated over the first three years of the Plan, suddenly jumped up in 1983-84 showing a growth of 13.6% over the preceding year. The increase in 1984-85 in the sector's production is expected to be no more than 1% over the previous year's record production. But, according to the official *Economic Survey 1984-85* "maintenance of the exceptionally strong performance of the previous year, in the face of unfavourable weather conditions, highlights the strengthening of the production base in Indian agriculture".

The fortunes of the industrial sector in the country during the Plan period have closely followed those of agriculture. The growth rate of industrial production which was a meagre 4% in 1980-81 on a low base of minus 1.4% in the previous year, rose to 8.6% in 1981-82 but fell to 3.9% in 1982-83. At least a part of this stagnation in industrial production was due to the stagnation in agricultural growth which created a demand constraint on the growth of industries like tractors, trucks, and a variety of durable and other consumer goods. With the agricultural revival in 1983-84, the industrial growth rate began to pick up. It rose to 5.5% that year and was estimated to be around 7% in 1984-85. The average growth rate of industry in the Sixth Plan period amounts to nearly 6%, which is a small improvement over the average of 5.3% over the preceding five years. However, this falls far short of the target of 8% annual growth rate fixed for the Plan period.

The performance of the infrastructural sector—power and transport—has also been below expectations of the Plan targets. The Plan target for power generation showed an annual average growth rate of 11.3% over the five-year period.

The actual growth rates were 5.9% in 1980-81, 10.1% in 1981-82, 6.6% in 1982-83 and 7.6% in 1983-84, all of them much below the target rate. Only in 1984-85 is the growth rate of electricity generation likely to turn out to be 13.5% which is 2 percentage points above the target rate fixed for the whole Plan period. Power shortage has persisted, particularly in the northern region during the Plan period. As against the target of 191b units of electricity generation by the end of the Plan period, the achievement in 1983-84 was 149.5b units. In the first nine months of 1984-85, that is, April to December, the generation was 116.1b units. On that basis, the generation figure for the entire year may be put at 154b units which is 37b units less than the Sixth Plan target. The Sixth Plan document in its chapter on "Development Perspective 1979-80 to 1994-95" states—"Electricity generation will need to be raised from 191b units in 1984-85 to 395b units in 1994-95 to meet the energy requirements for the projected levels of industrial production and the requirements of other sectors". This also has serious implications on future development of the economy.

In contrast, the performance of the petroleum sector during the Plan period has been upto the mark. Crude oil production in the 70s (1970-71 to 1980-81) had increased by 55% from 6.8m tonnes to 10.51m tonnes. In the next two years output doubled to 21.06m tonnes. A further 24% increase was achieved in 1983-84 and production reached 26.02m tonnes. The target for crude production had been fixed at 29.63m tonnes. As against that the achievement was 29.02m tonnes. It may be added that the target originally fixed in the Sixth Plan for 1984-85 was 21.6m tonnes. The actual achievement is, therefore, 7.4m tonnes more than the original Plan target.

Another essential infrastructure supportive of industrial growth is transport. The performance of this sector during the Sixth Plan period has been satisfactory in as much as no serious bottlenecks in the transport of goods like coal or cement by railways were experienced during the Plan. For the year 1983-84, initially, a target for movement of 241m tonnes of revenue earning goods traffic was set, representing an increase of over 5% over 1982-83. Actual rail freight was limited to 230m tonnes of revenue-earning traffic in 1983-

84. There was some improvement in 1984-85, the revenue-earning traffic during April-December recording an increase of 3.2% over the corresponding period of the previous year. A part of the explanation for the shortfall in the performance of railways is the demand constraint. The Sixth Plan has envisaged a demand on the rail transport to the tune of about 309m tonnes of originating traffic in 1984-85. The figure reached in 1983-84 was 230.1m tonnes and in 1984-85 it may turn out to be 235-240m tonnes, which is nowhere near the target figure of 309m tonnes.

An important achievement of the Indian economy in the last two years of the Sixth Plan is the containment of inflation. Prices had come under pressure in 1983-84 because of the lagged effect of drought in the previous year, and the pressure on prices continued into the early part of 1984-85. The wholesale price index moved up by 7.4% between Mar 31-Aug 25, 1984. However, there was a marked improvement in the latter part of the year owing to spectacular improvement in agricultural production. There was a normal seasonal decline in prices after August 1984. By Feb 9, 1985, the annual rate of inflation in wholesale prices had declined to 4.6%. The annual rate of inflation as measured by the Consumer Price Index in December 1984 was also a low 5.2%.

The balance-of-payments position had also improved considerably in 1983-84. There was further improvement in 1984-85. The government voluntarily terminated the International Monetary Fund (IMF) arrangement effective from May 1, 1984, after having drawn Special Drawing Rights (SDR) 3.9b out of SDR 5b available under the three-year arrangement. Despite the cessation of IMF drawings in that year, foreign exchange reserves (including gold and SDR) in 1984-85 had increased by Rs 547 crores upto January-end 1985. Part of this increase in terms of rupees was because of the strengthening of the US dollar in world currency markets and the consequent increase in the rupee value of dollar holdings. But two other factors have also contributed to that improvement. These are better performance of the export sector and increased inflow of funds from non-resident Indians abroad.

Export performance which was relatively weak in 1983-84 showed a welcome improvement in 1984-85. The rupee value of exports showed a growth of 23% in the first eight months compared to a growth of only 7% in the corresponding period of 1983-84. However, imports increased by about 14% in this period compared with a decline of 4% in the same period of the previous year. The trade deficit in the first eight months of 1984-85 has been estimated at Rs 3,017 crores which is slightly lower than the

deficit of Rs 3,080 crores in the same period of the previous year. Earlier deficit had declined from 4.6% of GDP in 1980-81 to 3% of GDP in 1983-84. It must have declined a little further in 1984-85, however, the exact figure is still to be released. In absolute terms, however, the deficit continues to be around Rs 5,800 crores which is quite high. More vigorous efforts at export promotion and import substitution are required. In the latter, it is possible to economise by reducing imports of edible oils, which can be done by a substantial increase in the domestic production of oil seeds; reduction in import of crude oil, naphtha, fertilizers and other petroleum products, which again requires stepping up production of these in the country itself, for which, fortunately, the outlook is good and situation promising; and, exercising strict discipline in the imports of defence equipment, machinery and even technology. The country should import only that machinery and technology which is not available in the country. On the export side, while there is now a distinct possibility of the country being able to export about 5m tonnes of foodgrains annually, there are several other agricultural products which offer potential for export that needs to be exploited. Export promotion through export subsidies has not yielded results in the last five years. Export subsidies now amount to over Rs 600 crores. What India needs to do in order to encourage exports is to take steps towards improving the competitiveness of the Indian industry. So long as the industry remains under the protective wings of protection and subsidies, it will not be able to develop the level of efficiency required to make its products competitive in the international market. The policy thrust in the fiscal and foreign trade spheres provided by the Union Budget for 1985-86 and the announcement of import-export policy for three years instead of the previous practice of announcing the policy for one year only, is a step in the right direction.

The balance of payments position continues to be strengthened by net inflows on other accounts, though there are a number of uncertainties affecting these flows. Partial data available indicates that although the inflow of remittances from Indian workers abroad continues to be relatively high, the earlier growth in these inflows has declined considerably and prospects are necessarily uncertain. Inflows from non-residents in the form of deposits with Indian banks had increased to Rs 961 crores in 1983-84 but declined in 1984-85 because of higher interest rates abroad. The inflow was nevertheless substantial, with the accretion of Rs 619 crores (including accrued interest) upto December-end, 1984, compared with Rs

750 crores in the same period for the previous year. However, these accretions of foreign exchange have not been found sufficient to meet the foreign payments deficit with the result that the foreign exchange kitty has to be replenished by commercial borrowings which have been on the increase in the past few years. Commercial borrowings have become necessary for supplementing the inflow of foreign assistance as an important means of financing because foreign assistance is becoming increasingly more difficult to get.

While on the whole, the achievements of the Sixth Plan are quite impressive, one must not forget some of the basic weaknesses that still remain and which need to be corrected when making an assessment about the future. The performance of the industrial sector has been much below expectations and an overall growth rate of 6% per annum in industrial production falls far short of the target of 8 to 9%. The working of industrial public sector undertakings continues to be inefficient and instead of being a help in financing further development, they are proving to be a constant drain on the public sector resources. The resource position of the Central and state governments has deteriorated so that planners are finding it difficult to find all the finance needed for financing the proposed public sector outlay of Rs 1,80,000 crores. The external economic environment of the country is also becoming increasingly unfavourable. The uncertainties on the agricultural front due to climatic factors still remain. These are some of the difficulties that the Seventh Plan will also have to face. The difficulties on the resource front stem from certain structural features of Plan financing, which have evolved over a number of years and which will take time to correct. Welcome changes in the fiscal and industrial policies have been recently initiated. This indicates a realisation of the fact that instruments of regulation devised in the early stages of our planned industrial development may not be appropriate in the diversified and sophisticated industrial structure of the present day. Closely allied with financing the Plan is the question of inflation. Heavy doses of deficit financing are bound to result in generation of new inflationary pressures in the economy which instruments like public distribution system will not find easy to contain.

A new thinking on the whole development strategy and Planning is needed to meet these and various other difficulties. Perhaps the emphasis is to shift from industrialisation as the sole aim of Planning to promoting a more rapid growth of agriculture and increase in agricultural productivity. For therein lies the solution to the problems of endemic poverty and unemployment. ■

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PROJECT WILDLIFE

BY N. P. SINGH

India possesses a rich, abundant and colourful wild life. According to experts, there are more than 350 species of mammals, about 1,200 species of birds and more than 20,000 species of insects. Besides, there are a large number of reptiles and crocodiles found all over the country. The *Royal Bengal Tiger*, the *Great Indian Elephant*, the *Asiatic Lion*, the *Indian Bustard*, and the *Siberian Crane* are some of the most well-known specimens of wild life in the country. While all these species face in some degree the danger of extinction, it is the cheetah (the fastest animal in the world) that has become extinct due to indiscriminate killing by poachers.

The enormous destruction of wild life has been hastened by population explosion, large-scale industrialisation and urbanisation. There has been deforestation on a massive scale, leading to soil erosion, floods and ecological imbalance. The increased pressure on land for food and raw materials has led to indiscriminate deforestation and felling of trees.

Institutional Network

It is in the larger context of the conservation of environment that the problem of preserving wild life can be appreciated. From 1952 to 1972, wild life management and conservation in India was governed under the National Forest Policy, administered by the state governments and Union territories. In 1972, a comprehensive legislation called the Central Wild Life Act was enacted which is applicable throughout the country. Under this Act, threatened species of animals have been listed in five schedules, giving them protection from hunting, and trade and commerce in these species has been subjected to regulations. This was followed in 1980 by the Forest Conservation Act, which aimed at preserving forests in the country, as forests constitute the natural habitat of wild life. Under this Act, no forest area can be diverted for non-forestry use without the prior approval of the Central Government. A National Action Plan for Wild Life has also been drawn up recently, which will be placed before the Indian Board of Wild Life (IBWL)—an apex advisory body headed by the PM.

Besides the IBWL, there are a number of non-governmental, voluntary organisations dedicated to the cause of wild life conservation. The voluntary organisations doing invaluable work in the field are: (i) The Bombay Natural History Society; (ii) The Wild Life Preservation Society of India,

and (iii) The World Wildlife Fund, India. The Bombay Natural History Society (BNHS) has done pioneering work for the identification and documentation of India's flora and fauna. It has also established a fine Natural History Museum and Library.

The World Wildlife Fund, India (WWF India) was established in 1969 to help in safeguarding the country's environment from incalculable damage through thoughtless exploitation. Its concern embraces the whole spectrum of nature—plants, animals, forests, landscapes, water, soil and other natural resources.

The aim of the WWF India has been to raise public support, create an awareness of conservation needs among the masses, and raise finance for its conservation, research and educational activities. Among the noteworthy projects of WWF India during the last 10 years, mention could be made of the following:

A. For protection of endangered species: Asiatic Lion; Asiatic Elephant; Black-necked Crane; crocodiles; Great Indian One-horned Rhino; Lion-tailed Macaque, Nilgiri Tahr; Siberian Crane; and Wild Dog.

B. For protection of habitat: Bandipur Ecological Survey; Dalmia Hill Sanctuary; Jawahar National Park; Nanda Devi; Pirotan Island; Silent Valley; Western Ghats.

C. For conservation, education and awareness: Nature clubs of India; photographic exhibitions; slide presentation and film shows; and snake shows.

D. WWF International Projects: Project Tiger; Hangul or Kashmir stag; and Himalayan Musk Deer.

These projects of WWF India have been implemented in active cooperation with other organisations such as the BNHS Indian Institute of Science, Bangalore, Zoological Survey of India, Botanical Survey of India, National Institute of

Oceanography and the Central and state forest departments. For its international projects, WWF India works in association with World Wildlife Fund International which has its office in Gland, Switzerland. It has also been getting support from the International Union for the Conservation of Nature and Natural Resources (IUCN).

The Government of India has decided to set up an Institute of Wild Life at Dehradun in 1984. The aim of the institute would be to study the problems of wild life in all its ramifications (scientific, social and management) and to meet the manpower requirements of conservation programmes and projects. The institute's governing body would be chaired by the Secretary, Department of Environment, Government of India.

Achievements

As a result of the efforts made by the Central and state governments and voluntary organisations, the protected area in the country now comprises 87,735 sq km or nearly 3% of the total geographical area of the country. Forty-four national parks and 207 sanctuaries have been established all over the country, providing considerable protection to endangered species. Two special projects—Project Tiger and Crocodile Project—have been initiated by the Central government in collaboration with FAO and UNDP. The Project Tiger, started in 1973 with nine tiger reserves, has now 15 tiger reserves located in Rajasthan, UP, West Bengal, MP, Karnataka, Bihar, Assam, Orissa, Maharashtra, Kerala, Andhra Pradesh and Arunachal Pradesh. The tiger population, which was 1,827 in 1972, increased to 3,015 in 1979. The achievements in the conservation of wild life in India have been considerable, but there is no room for complacency. The cheetah has already become extinct and there are creatures like the Great Indian Bustard, the Siberian Crane and Lion-tailed Macaque which are on the verge of extinction. We are still far from the goal of 33% forest cover in the country. The need of the hour is to involve the youth of the country in the movement for the conservation of environment and the protection of wild life in the country. The experiment of the nature clubs of India, launched in 1976 under the auspices of WWF India, has tremendous potential. There are nearly 492 clubs with over 10,000 members.

Speaking on the occasion of World Environment Day (Jun 6, 1985) PM Rajiv Gandhi observed, "It was greatly encouraging that a large number of people across the world, particularly the young, have dedicated themselves to restoring the environment. This is an affirmation of faith in life." The conservation of wild life is necessary in order to keep the habitat fit for human beings.

JUNGLE CALL

The World Wildlife Fund's (WWF) worldwide endeavour to preserve nature and natural resources naturally needs worldwide popular participation. One way of participating is to buy the WWF's greeting cards, calendars, posters, note-pads, etc. Another way is to make donations. For further information, WWF India can be contacted at: Post Box No. 6042, c/o Godrej & Boyce Mfg. Co. Pvt. Ltd., Lalbaug, Parel, Bombay-400 012.

PUNJAB

AFTER THE STORM

The reverberations of the bomb explosions have subsided leaving in their wake an eerie silence wherein the bickering of various factions of the Akali Dal can be heard loud and clear. It is evident that the bomb blasts have done more damage than killing innocent people and spreading terror—they have shattered the myth of unity among the top echelons of Sikh leadership.

Obviously Baba Joginder Singh, convenor of the United Akali Dal ad hoc committee, does not command the kind of loyalty Bhindranwale enjoyed. The resignation of the Akali Dal top brass including Harchand Singh Longowal, Gurcharan Tohra and Prakash Singh Badal caused a tremor in the state and district levels. The local presidents of the Dal

ANTI-TERRORIST ACT

In the wake of the recent spurt in terrorist activities including the widespread bomb blast carnage and the unearthing of a plot to assassinate PM Rajiv Gandhi by America's FBI, the Indian Government, in a bid to arm itself with comprehensive legal powers to curb the spreading reign of terror, passed the anti-terrorist Bill. The Terrorist and Disruptive Activities (prevention) Bill, which consists of three parts running into 24 sections, confers on the Central Government adequate powers to prevent and cope with terrorist acts. Under this the Centre also has the power to constitute designated courts for speedy trial of offences committed under this Bill in consultation with concerned state governments. However, the Centre has been provided the authority to set up such a court in the event of the concerned state government failing to do so. The Bill, after unanimous approval by both houses of legislature was passed by the President, thereby becoming an Act.

The Act defines a terrorist as one who, with the intent to overawe the government or to strike terror in the people or any section thereof or to alienate any section or adversely affect the harmony amongst different sections of people, does anything by using bombs, dynamites or other explosive or inflammable substances or firearms or lethal weapons, or poisons or noxious gases or other chemicals or any other substances, biological or otherwise in such a manner as to cause death or damage or destroy property or disrupt supplies or services essential to the life of the community. Under the Act death penalty is awarded for a terrorist act which results in the death of a person. For other cases punishment may be extended upto life imprisonment, from a minimum term of five years and may also include a fine.

The Act also provides for punishment of any person who contravenes any provision or rule made under the Arms Act, the Explosives Act, the Explosive Substances Act or the Inflammable Substances Act, in any notified area. This may include imprisonment for a term which may extend to 10 years. If it is established that the person also had intentions to aid any terrorist then death sentence or imprisonment for a duration of a minimum of three years which may extend to life imprisonment, may be awarded.

Life imprisonment from a minimum of three years may also be awarded to "those who conspire, or attempt to commit, abet, advocate, incite or knowingly facilitate the commission of a terrorist act, or any act preparatory to a terrorist act".

In addition to this the designated authorities specified for the Central Government as officers not below the rank of joint secretary and for the state government as officers not below the rank of district magistrate have been empowered with sweeping powers for the prohibition of any disruptive acts—ranging from communication with people living outside India for information to the demolition of buildings or premises suspected to be used for such purposes to the construction or alteration of buildings or structures necessary for conduct of operations against terrorists.

The Act will undoubtedly go a long way in strengthening the hands of the government against anti-national disruptive forces to a large extent and also help them to nip their terror tactics in the bud.

demanded the withdrawal of Longowal's resignation in particular. And the ad hoc committee of Baba Joginder Singh was unequivocally rejected. Ultimately succumbing to the pressure, Longowal decided to withdraw his resignation.

While the squabbles in the Dal continue to disrupt the ranks of its leadership, the terrorist organisation of the Akalis, both within and outside India, continues to disrupt the nebulous calm in the country. On May 13, America's Federal Bureau of Investigation (FBI) unearthed a terrorist conspiracy which shook the very foundations of the Parliament House in New Delhi—a conspiracy to assassinate PM Rajiv Gandhi during his visit to the US. It also uncovered a plot to kill the Haryana CM, Bhajan Lal, who had gone to the US for eye treatment. Apart from this the FBI uncovered a plan to develop a programme of training Sikhs residing abroad in the use of firearms and explosives. The FBI findings have a dangerous corollary. And that is that anti-national elements abroad will go to any lengths to disrupt life in India and create an atmosphere of panic and uncertainty in order to achieve their goals of a Sikh homeland. What is more horrifying is that these conspiracies were part of a much bigger plan which included sending hit squads to India to blow up strategic sites like government buildings, bridges, hotels, temples, shrines and even a nuclear power plant. The FBI investigation also revealed that the terrorists had been paying frequent visits to west European countries, recently, probably to hire hit-men to assassinate the PM during his visit to France and Algeria and thereby avert the possibility of a backlash against Sikhs in the US. For, the US has made no secret of the fact that it will not tolerate any terrorist activities on its soil.

Keeping in view the implications of these conspiracies and the bomb blasts in north India the government passed the Anti-terrorist Act (see box). Amendments were also made in the existing Arms Act and the Evidence Act. But, undeterred by such preventive measures adopted by the Centre, Joginder Singh justified the carrying of arms into the Akali Takht on the pretext that it was enjoined by Sikhism. And, as an after thought, added that these weapons were used by Sikhs against oppression and injustice and not against innocent people. Surprising in the light of the fact that until now these weapons have been used primarily to butcher the innocent.

And then on Jun 1, as per their agitation itinerary, the Akalis launched the *Ghathughara* (genocide) week to commemorate the first anniversary of Operation Blue Star. Fearing another offensive by the extremists the government took all possible measures to avert the crisis. Security forces were placed on full alert in the more sensitive northern states as well as in the Capital. But, apart from sporadic incidents of bombing in Punjab, no major catastrophe has confronted the nation. And while this undoubtedly comes as a welcome relief there is the lurking fear that perhaps the terrorists are playing a waiting game. The Centre is handicapped because it has no one with whom it can negotiate the terms of settlement to the festering Punjab problem as none of the Akali leaders has unanimous Sikh support. All it can do now is sit back and wait for such a person to make an appearance before it is too late.

INDIA-USSR

ROLE REVERSAL

Rajiv Gandhi's visit to USSR heralds the beginning of a new chapter in Indo-Soviet relations. Thereby a marked reversal of roles is now evident with the Kremlin displaying its anxiety to remain in the Rajiv Government's favour and Washington going all out to woo the young Indian PM. The Kremlin is also aware that where once it was the major supplier of defence equipment and technology for India it can now no longer keep pace with its urgent demands for highly sophisticated modern technology. And it is this red herring which Washington is flaunting before New Delhi to entice it into its camps.

That Rajiv Gandhi chose to initiate his major trips abroad with a six-day state visit to the USSR, however, has its own significance. The country still remains a major partner in India's new endeavour to achieve a vibrant and dynamic economy in the shortest possible time. In fact, the conclusion of several major economic agreements was the high point of his visit. It is also evident that Rajiv nurtures the time-tested Indo-Soviet friendship quite in the same way as his predecessors did—a fact which Soviet leader Mikhail Gorbachev was quick to emphasise.

and go, but relations of friendship and cooperation between the USSR and India continue to develop in ascending order."

The overt display of cordiality and friendship and the effusive warmth with which the Soviets greeted Rajiv was overwhelming, to say the least. Right from the moment he alighted from his aircraft and set foot on Russian soil he was given the proverbial red-carpet treatment. Gorbachov and Rajiv had both formal and informal talks—the latter in complete privacy—for several hours during the visit. The talks were wide-ranging covering both bilateral and international issues. Then, in the presence of the Politburo of the Soviet Communist Party—an indication of the high importance the USSR accorded to the event—the leaders of the two countries signed two agreements on economic cooperation. As per the flexible terms of the first agreement the host country will provide India a credit of 1m roubles to bolster bilateral economic cooperation. The repayment of the principal and the payment of interest will be in Indian rupees in accordance with past credits. Also, the repayment will be utilised by the USSR for purchase of Indian goods, in line with the Indo-Soviet trade agreements.

The second agreement ensures greater Soviet cooperation in important sectors of the Indian economy. Thereby trade and scientific cooperation between the two countries has been extended upto 2000 A.D. and India becomes the exclusive non-Eastern bloc country with such long-term understanding with the USSR. The main sectors covered by the agreement include power, petroleum, steel, mining, oil-drilling, coal, machine-building, ferrous and non-ferrous metallurgy. The two countries will also consider cooperation in construction in industrial and other projects in the Third World countries. In addition to this the agreement provides for participation of Indian organisations in civil and industrial projects within USSR in the manner and form mutually agreed upon, in specific cases. Furthermore, India and USSR have given due consideration to the evolving pattern of development of technology, the potentials and capabilities on both sides and will henceforth develop new forms of economic cooperation and trade which are mutually beneficial. For this the complementarities of their economies will also be taken into account.

A rather surprising issue was brought up by Gorbachov during this visit. He gave a fair indication of USSR's interest in initiating a move for collective security arrangements in Asia—no doubt an oblique reference to Afghanistan. By doing so he exhibited his keenness to revive the Asian collective security plan proposed by Brezhnev in the early '70s which was rejected by India then because of its sheer impracticality. It is, therefore, hard to decipher why Gorbachov raised the issue at all.

The visit concluded with both sides signing a joint statement. In this the two countries have expressed serious concern over the continuing tension in some areas of South-West Asia, particularly Afghanistan. Both have also reiterated their conviction that only a peaceful political solution can resolve the crisis. The statement calls upon countries of the region to cease armed conflicts, exercise restraint and cooperate to reduce tension and restore peace. Interestingly, though, the document underlines the similarity in the positions of India and USSR on major contemporary issues. With regard to the threat of an imminent nuclear holocaust the two sides have categorically stated that its prevention is of paramount importance. They stressed the rôle nuclear-weapon states should play to achieve general and complete disarmament. And quite hearteningly, the USSR has declared that it will not take the initiative to use nuclear weapons. The joint statement also deals with wide-ranging issues including military intervention, Iran-Iraq war, Diego Garcia and Nicaragua.

Upon his return to India Rajiv described his visit as fruitful. But whether the happenings beyond the Iron Curtain will cast a shadow on the stage Washington has set for the Reagan-Rajiv talks will be closely scrutinised by political spectators both at Kremlin and Pentagon.

INDIA-FRANCE

A FESTIVE OCCASION

The exposure of the French connection in the espionage network busted by the bright boys of the CBI early this year and the consequent expulsion of a French naval attache and the French Ambassador had resulted in Indo-French relations plummeting to an all-time low. And, therefore, when PM Rajiv Gandhi landed in Paris on the second leg of his whirlwind five-nation tour one expected undercurrents of tension and distrust. But the effusive red-carpeted Parisian welcome for the Indian PM, apart from allaying these fears, went to show the importance the Socialist Government accords to relations with India.

And the unprecedented presence of the French PM Laurent Fabius at the Orly airport to receive Rajiv Gandhi, underlined this fact.

Among the developed countries France is perhaps the only one which has, on numerous occasions gone out of its way to render its support to numerous Indian projects, and advocate India's case before the rich nations. France also supported the Third World causes espoused by India. It is, in fact, the only country which did not hesitate to transfer sophisticated technology to India even in some strategic fields, and is, at the moment, helping it in diverse fields ranging from coal mining, environmental study and management telecommunications, ocean development and exploration, electronics, nuclear energy, space and defence.

The talks between French President Francois Mitterrand and Rajiv Gandhi enhanced this bilateral cooperation. However, Rajiv did not hesitate to point out that any French assistance to Pakistan for the development of a nuclear bomb would only strain Indo-French ties. Rajiv also gave his unconditional support to the UNESCO projects. The tangible result of the wide-ranging talks between the leaders was the signing of two agreements, one of which concerns strengthening of scientific cooperation between the countries covering contracts in biotechnology, physical optics, applied mathematics and renewable energy sources and is also related to the establishment of an Indo-French centre for advanced research in Delhi. The second agreement is a joint project to clean the highly polluted Ganges. Both the countries have agreed on a broad framework for a programme to generate energy from the Ganges and also from agricultural waste. France and India are also busy negotiating deals on French helicopters, airbus commercial jets, computers and railroad equipment. And then, much to the relief of anxious political observers, Rajiv unequivocally denied the possibility of signing the Nuclear Non-Proliferation Treaty (NPT) which he felt was distinctly biased in favour of nuclear power states.

But the high point of Rajiv's French visit was undoubtedly the inauguration of the year-long Festival of India in France. Viewing the colourful pageant of Indian folk dancers from various states, and the elaborately adorned camels and elephants from atop the Eiffel Tower, Rajiv and Mitterrand toasted the success of this venture which aims at enhancing France's interest in Indian culture. And as part of this cultural exchange India, too, will host the Festival of France in 1986. The Festival of India commemorates another high in Indo-French relations with the two leaders parting on an optimistic *au revoir*.

ANTI-RESERVATION STIR

AGITATIONS STALL ACTION

Centrifugal forces in Gujarat are spinning the state irremediably into a whirlpool of chaos and confusion. With each passing day the possibility of a solution to the festering reservations issue recedes further into the realm of impossibility, despite concerted efforts by the Centre and the state government.

Gujarat has become a synonym of violence. Even with the army, the CRPF and the Malabar special police force deployed in the state, the ceaseless, horrific bloodletting continues. Practically the entire state is now under army vigil or indefinite curfew, but to no avail. For, the moment curfew is relaxed violence begins. On May 12, an army takeover was staged in the walled city of Ahmedabad following a spate of violence which claimed the lives of at least 12 people and injured scores of others.

Frantic efforts by the state government to bring the anti-reservationists to the negotiating table only resulted in a stalemate once again. According to the leaders of the agitating students and parents the talks failed because "the government is not prepared to accept any of our demands," which include a judicial inquiry into the violence and police atrocities, withdrawal of the proposed 18% increase of reservation for the socially and educationally backward classes and a phasing out of the entire reservations system. In sharp contrast to this CM Madhavsingh Solanki was of the opinion that the agitation should be called off in the light of the fact that the government had postponed the implementation of this proposed 18% increase.

The state government was, however, successful in its attempts as far as the Gujarat panchayat staff was concerned. The panchayat employees called off their week-long strike following a settlement with the government. The government has now agreed to consider the panchayat staff as government employees. They have also been promised adequate representation in the government joint council. But the effect of this minor triumph was nullified manifold when violence flared up in Baroda, Surat, Anand and various small towns of Gujarat. The

agitationists have devised several new arms with which to attack the authorities. Acid bombs, burning rags, lathis filled with explosives and 'molotov cocktails' (petrol bombs) are their current favourites.

In a bid to arm itself against these disruptionists the Gujarat Government, on May 26, promulgated the Anti-social Activities Preventive Ordinance, or the anti-goonda ordinance as it is popularly called, with immediate effect. This Ordinance empowers the government to detain any individual or group for a maximum period of one year if they are caught indulging in nefarious activities which are harmful for the maintenance of law and order. Under the provisions of this Ordinance the government is also empowered to detain a person "on his past record of anti-social activity without the need to produce witnesses". Activities identified under Sections 16, 17 and 22 will also be covered by this Ordinance.

Meanwhile, another round of talks between the government and the agitationists once again ended inconclusively on May 31. And while the call for a Gujarat bandh on May 30 was withdrawn following the release of two detained agitation leaders, a fresh call was given for a bandh on Jun 7. The government remained inflexible in its stance making withdrawal of the agitation a precondition for further talks while the agitationists refused to concede until a solution was found on the reservations issue. They also turned down Solanki's appeal to withdraw their exam boycott programme.

The whole of Gujarat is now intent on striking for one reason or another. The state electricity employees have threatened to go on strike to press for abolition of the caste based roster system. The reservations stir has taken a curious turn in itself. Pro-reservationists are now on the war path, too, clamouring for implementation of the proposed 18% increase in the reservations quota. Trade and business have already come to a grinding halt with various trade associations on a five-day hartal in protest against the state government's inability to maintain law and order. Opposition leaders are all for Solanki's dismissal. And finally the anti-reservationists observed Gujarat bandh on Jun 7 as part of their fresh agitational programme in collaboration with 7,00,000 government employees who went on an indefinite strike to press their demand for abolition of the roster system. Violence has escalated once again following the bandh. To add to the chaos textile mills in the state have also started voicing their discontent regarding the government's new textile policy which makes no mention of taking over of sick and closed units. The state government is making all possible attempts to improve the situation and is resorting both to promises and threats. While acceding to some of the demands of the agitationists, which include a judicial inquiry into police excesses and violence and stalling of the implementation of the new 18% hike in the reservations quota, it has also issued the threat to take stern action against all those who are giving bandh calls. Not that it has made any difference to the agitationists. The anti-reservationists have, in fact, issued a fresh threat to boycott the next academic year commencing in colleges and universities from Jun 15, unless the reservation system is totally abolished.

INDO-SRI LANKA

TAMIL-MUSLIM BLOODBATH

Deat: has become mere statistics in the tiny island country now and the number of dead bodies just so many points scored over the enemy. The macabre games of the Tamil militants on the one hand and the Sinhalese, Tamil Muslims and the utterly indisciplined psychopathic soldiers of the Sri Lankan army on the other have now reached a stage where neither of the sides can call a halt, even if they wanted to.

May 14 was perhaps the bloodiest day in the recent history of the Sri Lankan ethnic crisis. In a gory carnage the Tamil Tigers ruthlessly gunned down 150 Sinhalese men, women and children in Anuradhapura, the holiest city for Sinhala Buddhists in the country proving that the joint forces of the Tamil militants were far more deadly than before. The gruesome episode was obviously enacted in retaliation against the killing of 75 Tamils a week earlier in Anuradhapura itself. The reprisal from the Sinhalese quarters was swift and the very next day nearly 50 Tamils were massacred in cold blood followed by 28 on May 16 and 40 on May 19. In the wake of the Anuradhapura massacre the government decided to expel 20,000 Tamils from the whole district between the northern town of Vavuniya and Anuradhapura as part of its drive against Tamil guerillas and send them to the Tamil-dominated north.

Meanwhile, on the broader international front, too, the Sri Lankan government gave the South Asian Regional Cooperation (SARC)

organisation a few bad moments. As a mark of protest against an alleged Indian statement on the situation on the island country, it decided to boycott the SARC ministerial meet at Thimpu. Had it gone ahead with its resolution it would have been a clear violation of the ministerial declaration of 1983 which specifically mentions that bilateral and contentious issues shall be excluded from all SARC deliberations. However, frantic efforts by the rest of the six nations of the SARC including a personal telephone call by PM Rajiv Gandhi made Sri Lanka reverse its decision. If all goes well the SARC meet scheduled to be held in Dhaka, in December this year, will take place as per programme.

Finally, the devastating cyclone in Bangladesh brought the two leaders of India and Sri Lanka together to discuss the ethnic problem in the island nation. President Jayewardene came to New Delhi on Jun 1 and Jun 2 and in an event unprecedented in diplomatic history of the two countries, he and Rajiv flew to Dhaka together to express their sympathies to the cyclone ravaged victims. The gesture was fully appreciated by Lt Gen Ershad.

Time was snatched, before, between and after the Dhaka visit for hurried talks between the two leaders on the matter uppermost in their minds—the Tamil problem. During the talks Rajiv Gandhi once again explained the Indian stand on a political settlement. Quite surprisingly, a considerably mellowed Jayewardene displayed his keenness for a negotiated settlement, too, in sharp contrast to his earlier stand on a military solution. Both sides agreed that immediate steps should be taken to defuse the mounting tension in Sri Lanka and create a proper climate for a framework of the unity and integrity of Sri Lanka. Both sides also agreed that it was imperative that all forms of violence should abate and cease. Jayewardene also gave his assurance that every possible effort would be made to restore normalcy in the severely affected northern and eastern provinces of Sri Lanka to facilitate the early return of Sri Lankan Tamils who had fled to India. He also promised to declare amnesty for Tamil militants provided they surrendered to the Sri Lankan Government unconditionally.

The lines on which Jayewardene envisages a political solution to the Tamil issue include elections for the constitution of district councils with representatives from the area, followed by the grant of more powers and rights to these councils. Later the setting up of coordinating councils might also be considered. With regard to withdrawal of troops from the Tamil-dominated regions of Sri Lanka, however, Jayewardene exhibited evasiveness when he said: "Troops won't be there if there is no violence". Considering the fact that it is the troops which have been responsible for violence in the first place the statement does sound incongruous. The two leaders parted with the promise of retaining future contact.

Jayewardene's return to Sri Lanka has been greeted by another bloodbath. On Jun 6, 80 Tamils were butchered by the Sinhalese, assisted by security personnel in a number of Tamil villages near Trincomalee which implies that either there is faulty communication between the authorities and the masses on the island or else the masses are simply not following the instructions of the authorities.

MAHARASHTRA

BEATING RETREAT

Like a fallen angel making a reluctant exit from his heavenly abode Vasantdada Patil resigned as CM of Maharashtra, following differences with the Centre. Ever since assuming office for the fourth successive term, on Mar 12 this year, Patil had repeatedly been complaining that it was becoming increasingly difficult for him to function. But it was only during the Bombay Municipal Corporation elections that things came to a head. Patil, flighted by the Centre's selection of party nominees for the elections without consulting him, adopted an openly critical stance.

The Centre, on its part refused to take matters lying down, and on numerous occasions tried to put Patil in his place. When N.M. Komble, MP, resigned from his post of President of the Maharashtra Pradesh Congress Committee (MPCC) the Central leadership, quick on the uptake appointed Prabha Rao, an MLC and former minister, to fill the breach as part of the process of revamping state units. Another thorn in Patil's side—for Rao is a well-known Patil critic. Apart from this his main grouse against her was that she belonged to a group which had deliberately abstained itself at the time of election of deputy chairman of the Legislative Council. Then the Centre also refused to accept the resignation of the Bombay Regional Congress Committee President, Murlidhar, also a vociferous Patil critic. The induction of such openly hostile people was bound to create friction and it did.

But what ultimately undermined in Patil's resignation was the controversy over congestion in Bombay. The Centre and Patil obviously did not see eye to eye on this explosive issue. While on the one hand Patil was busy endorsing the newly elected Shiv Sana's proposal that entry of people into India's largest metropolis should be restricted and those who had adopted Bombay as their home since or after 1974 be asked to leave, the Centre on the other hand categorically asserted that there could be no restrictions on people coming into Bombay or going out as it was a clear violation of Art 19 of the Constitution under which all citizens of India are given the right to move freely anywhere in the country. But Patil remained adamant in his stand that it was imperative to regulate entry of people into a city which was literally bursting at the seams with overpopulation. Said Patil "We can't create additional facilities and we cannot push the Arabian sea back."

Needless to say Patil's stance embarrassed the Central leadership which was confronted by a protesting Opposition. Furthermore to add to the Centre's embarrassment Patil voiced his reservation about the dual position occupied by PM Rajiv Gandhi—that of party chief and prime minister. He also levelled allegations against the working of the Congress (I) in his state.

In the face of this provocation Patil was summoned to the capital where he was unable to meet the PM. Feeling humiliated Patil returned to Bombay and even as Rajiv went on a nine-hour visit to Maharashtra, among other reasons to assure him of his continued support, Patil tendered his resignation after the shortest term of 82 days.

And after much speculation as to who would step into Patil's shoes Shivajirao Patil-Nilangokar, a former minister, was unanimously elected new CM of the state. Nilangokar, a seasoned politician, who has held various portfolios ranging from irrigation, public health to law, in different ministries was, however, surprisingly not a member of either of the two Houses of legislature before his appointment. In fact, he was even denied a ticket during the last Assembly elections. And he is the second CM, after S.B. Chavan, who hails from the industrially backward Marathwada region. Nilangokar had one more point in his favour. He had the blessings of his predecessor. And, perhaps to reaffirm his loyalty to Patil he has inducted 20 of the 23 ministers of the Patil Ministry into his till now 24-member Council of Ministers, with Patil applauding in the side-wings!

NAGALAND-ASSAM

COROLLARY OF CHAOS

Much to the disappointment of all concerned, the month-old much talked about secret talks between the Centre and the Assamese agitation leaders concluded with the Assam problem as unresolved as before. The talks, which began on May 6 after a gap of two years, once again failed to yield conclusive results and the differences on the ticklish issues of the cut-off year for identification of foreigners and disenfranchisement remain as strong as ever. The Centre has also rejected outright the demand of the agitationists to dissolve the Saikia Ministry. It however intends to proceed with its plans for the Lok Sabha elections in which the agitationists will be given the opportunity to establish their political supremacy. And if they succeed in doing so, then the Centre will have no option but to consider the dissolution of the state Assembly. For now the talks have been called off with a tentative proposal to resume them on Jun 28.

And even as the Assamese continue to be saddled with the unresolved foreigners issue, they have been confronted with another crisis—the renewal of the border dispute between Assam and Nagaland. The recent embittered history of border clashes between the two neighbouring states can be traced back to 1971 when the government appointed the one-man Sundaram committee to resolve the almost century-old territorial dispute initiated by the British Government. The committee put forth certain proposals in a bid to satisfy both sides. But the Nagas harboured a grievance that the proposals were biased in favour of the Assamese, with the result that in 1979 clashes between the Assamese and the Nagas, assisted by the Nagaland armed police force, in the villages of Sibsagar district of Assam resulted in the killing of 54 Assamese.

Obviously the 1981 meet of the chief ministers of the two states was a mere formality as it failed to find any acceptable solution to the border issue. Neither did the impassioned plea by the then Union Home Minister to resolve the problem have any effect. The recent eruption of clashes between the two states in the extremely sensitive north-eastern part of India however has much more dangerous portents. For it was not a confrontation between the Assamese and Nagas but between the

police forces of the two states. The violence was triggered off by the maraudings of a well-armed Naga force that went to the extent of capturing certain areas of Assam. The current wave of violence was triggered off by an utterly insignificant incident. Apparently, the Nagaland police force set up a check post in a reserve forest area of Assam in the sensitive border area and enclosed the 200 sq m area with barbed wires. Incensed, the Assam Police demolished the structure and carried away the construction material and barbed wire. The ensuing violence resulted in the death of 30 people. The series of attacks the Nagaland armed police launched on Assam police posts at Meragani, Dighalpani and Sisirpani in the Assam-Nagaland boundary had the residents fleeing for safety. And with the Nagaland police showing no signs of calling a halt to its frenzied rampage of arson and looting, the Centre issued a frantic appeal to the CMs of both states to get together and sort out the mess. At the Centre's insistence Assam CM Hiteswar Saikia and his Nagaland counterpart S.C. Jarin had talks in which no lasting solution was found yet again. The two CMs however decided to induct a neutral force consisting of Assam rifles to the affected areas and also decided to hand over the critically important task of maintaining inter-state border peace to the Border Security Force. But even if these steps do help to curb the current spirit of lawless violence, it is imperative that a lasting solution be found to the problem. Considering that Assam has border disputes not only with Nagaland but with Mizoram, Meghalaya and Arunachal Pradesh as well. And the surfacing of the underground in Mizoram and Tripura threatening chaotic developments in the entire north-eastern region.

NEW TEXTILE POLICY

CHANGING THE FABRIC

Within a relatively short period of time the Rajiv Gandhi government has become famous for inducting drastic changes into various sectors of the Indian democracy. The announcement of the new textile policy on Jun 6 is part of this design and heralds radical changes in the fast-sinking textile industry in an attempt to rejuvenate it. The main thrust of the policy is to treat all sectors of the textile industry as an integrated whole. It also seeks to remove all curbs on expansion or contraction of capacities by the mill sector and provides the industry 'full fibre flexibility' in the use of manmade fibres and cotton. The policy has been formulated primarily with a view to providing cloth of acceptable quality to the masses at large at reasonable prices.

The new liberalised policy, to be effective for the next five years, brings to an end the three-sector approach which was being followed by the government which has divided the industry into the mill sector, the powerloom sector and the handloom sector. From now on there will be only two sectors, namely the handloom sector and the power-driven sector. The unorganised powerloom sector will henceforth be treated on a par and allowed to compete. A suitable package of measures will also be evolved to facilitate healthy development of this neglected sector. No longer will setting up of powerlooms require prior permit either.

Several sweeping measures have also been proposed for the protection of the handloom sector. It is envisaged that by the end of the Seventh Plan period, the responsibility for the entire production of controlled cloth will be transferred to this sector. And in an attempt to improve the performance of this sector the policy also provides for the modernisation of looms, increase of yarn supply, encouragement of production of mixed and blended fabrics on handlooms, and the reservation of handloom articles for exclusive production. Apart from this, appropriate fiscal measures will also be introduced to remove the existing cost handicap this sector is facing. The government has evidently taken into account the welfare of the 7.2m weavers employed in the handloom sector before formulating its policy.

Due emphasis has also been given to accelerate the pace of modernisation of the textile industry. The government is already envisaging a 5% annual increase in the rise of synthetic fibre over the next five years to meet the booming demand for durable synthetic and blended fabrics at cheaper prices. While indigenous production of textile manufacturing industry will be encouraged, liberal imports of such machinery will also be permitted. A textile modernisation fund will also be created.

The new policy package will have far reaching consequences. It will go a long way in improving the performance of the textile industry providing the requisite momentum for revival, growth and development. With the multifibre approach designed to have beneficial impact on the industry itself, its upstream and downstream industries and most importantly the consumer himself.

(Continued on page 88)

BANGLADESH CYCLONE WAVE OF DEVASTATION

On May 25 a cyclonic storm, with a wind velocity of 130 km per hour, accompanied by tidal waves rising 4.5 km high lashed coastal Bangladesh and left in its trail over 40,000 dead, resulting in what may be the country's worst cyclonic disaster. Although thousands had been evacuated earlier, many perished and an entire island—Sandwip—with 10,000 inhabitants was swept away and less than one-tenth of the population in the islands of Charu Purbaksh and Burichar survived. Most residents of these islands were landless and had come to benefit from the unclaimed land available.

Large-scale rescue operations were conducted with the employment of naval ships and fishermen boats to search for the myriads still believed to be missing. After the fury of the cyclone, floods in Somilla and Sychet districts of Bangladesh brought more misery and large-scale evacuation operations were conducted. Further reports of a new cyclonic storm created more panic but mercifully the weather man was proved wrong.

In view of the pathetic situation in his country, President Ershad cancelled his state visit to the People's Republic of China. Bangladesh observed a day of national mourning and public servants in the country donated a single day's wages to the relief fund set up by President Ershad. Meanwhile relief operations are underway with attempts to rehabilitate 25 lakh victims. International aid has also come in from Japan, the US, the European Economic Community (EEC) and the International Red Cross. India has contributed Rs 21 crores for the relief of the cyclone victims. PM Rajiv Gandhi, in an expression of regional solidarity flew down with President Jayewardene to Dhaka to convey his sympathies to the cyclone victims.

Even as the initial shock of the disaster subsided doubts were cast regarding the efficiency of the Bangladesh government's cyclone warning system. Despite the assistance of the American weather satellite and the Indian Meteorological Department, which had predicted the cyclone one day in advance and passed on the information to Bangladesh officials, the disaster could not be averted. Radio Dhaka only warned the people about the approaching cyclone but gave no indications of the tidal wave and wrongly stated that the cyclone would weaken in the north-west.

LEBANON SYRIA GAINING GROUND

In East Beirut a massive car bomb explosion rocked the Christian quarter of Siniel-Fil district which resulted in 60 casualties, including 15 school children, and left more than 190 wounded. The bomb was packed with about 450 lbs of TNT. The resultant disaster is considered one of the worst since the US embassy suicide attack last September. The situation in West Beirut was equally tense when Shia Muslim Amal Militiamen and Lebanese Army soldiers battled against Palestinians for wresting control over the Palestinian camps of Sabra and Chatilla which, sources claim, are virtually now in Shia hands. Attempts are being made by the Shia Muslims to penetrate the third camp at Bourj al Barajneh, the last Palestinian stronghold.

In the recent fightings 369 people have been killed and 1,700 injured. A shaky ceasefire negotiated by Walid Jumblatt, the Druze militia leader also collapsed, badly affecting the work of relief agencies. President Amin Gemayal also narrowly escaped being hit by artillery shells, when his presidential palace came under shelling. In a later move, the Shia Muslim forces called a ceasefire. But the Palestinians displayed no signs of responding and so the shelling continued. The UN Secretary Council, however, passed a resolution in an attempt to put an end to the civil war. The present struggle has further consolidated Syria's position in Lebanon and its consistent support to the Shia Muslim militia is viewed by observers as an attempt to foil Arafat's peace solution with Jordan and Egypt by showing that he lacks the support of his own Arab community. However, the recent support extended by the Syrian backed dissident Fatah group, led by Abu Musa, to Arafat's Palestinian forces, in its conflict with the Shi'ite military forces, has been viewed as an

attempt by Syria to prevent any faction from attaining dominance in the local power struggle in order to strengthen its own position even further. Meanwhile, the last stage of Israeli withdrawal from Lebanon will be completed this month and in preparation Israel is already consolidating the position of its northern border against the possibility of further attacks.

REAGAN'S EUROPE TOUR BITTERNESS AT BITBURG

The 40th anniversary of VE-Day was celebrated all over the world; but in the Western world, which was most affected by the ravages of Nazism, the celebration was even more enthusiastic. In London a special service was held at Westminster Abbey where Queen Elizabeth II and other British leaders were present. In France, President Mitterrand laid wreath at the tomb of the unknown soldier. But everything did not run smoothly—President Reagan, whose visit to Europe coincided with the VE-Day celebrations, had to face unwelcome demonstrations in a number of places. Some socialist delegates walked out during his speech at the European Parliament. At Madrid, his visit was preceded by a massive demonstration by Spanish leftists and the communist members staged a walk-out during his address to the Portuguese Parliament. At the annual economic summit at Bonn, no agreement of importance was worked out. Reagan was isolated from the other six leaders present on the question of trade policies and also ran into numerous objections over his economic sanctions against Nicaragua.

NIGERIA EXPULSION OF IMMIGRANTS

'Get back to where you belong', became the determined policy of the Nigerian military government of Maj Gen Mohammed Buhari when he ordered 7,00,000 illegal immigrants to leave the country—by land or sea—before May 10. This is the second time in two years that Nigeria has driven out its immigrants. The first expulsion took place in 1983 when there was a mass exodus of 2m immigrants, though many returned back.

The majority of these immigrants are from Ghana, whereas the remaining have migrated from Chad, Niger, Cameroon, Burkina Faso, at a time when Nigeria could absorb excess labour and had relaxed its immigration laws due to the bright prospects opened up by a strong economy based on the oil boom. However, the worldwide oil glut and its effects upon the weakening Nigerian economy spelled the basic reasons for this expulsion as it did in 1983. With rising prices and fewer job opportunities the natural reaction was to blame the immigrants for the country's economic woes.

The actual evacuation led to chaos. Thousands of immigrants lined up for miles together awaiting customs clearance, and were forced to hand over 'scarce items' such as rice, milk and sugar apart from excessive money, to the authorities. With the deadline approaching, the situation became increasingly tense as the Nigerian authorities closed the borders with thousands of immigrants still trapped inside the country.

US-USSR FOR CRISIS CONTROL

The US and the USSR were allies during the struggle against Nazism. But on the 40th anniversary of VE-Day, Mikhail Gorbachov delivered one of the toughest speeches against American imperialism at the Kremlin's Palace of Congresses, saying that "it was at the forward edge of the war menace to mankind". And at Strasbourg, President Reagan's speech in the European Parliament also showed signs of hardening of attitudes towards Moscow. Yet, it was tempered by a few new "practical steps" which the President advocated, including exchange of observers at military manoeuvres and better communication between the US and the Soviet military commanders in order to reduce the risk of a possible nuclear war.

However, there is a silver lining to the dark cloud. Both sides are enthusiastic about improving the US-Soviet hot line and establishing "crisis centres" manned by both the US and the Soviet personnel. Further, although neither side wants to limit its nuclear arsenal, there is broad support for attempts at improved crisis management. The US and its Western allies feel that crisis control is now more important in order to avoid an accidental nuclear holocaust. A visit by the US Commerce Secretary, Malcolm Baldrige to the Soviet Union also helped to clear the air.

PAKISTAN

END OF MILITARY ERA?

There is a general optimism regarding the days of direct military rule soon coming to an end in Pakistan. Even Opposition politicians who had advocated a boycott of the February general elections have opined privately that martial law may end soon. Ghulam Mustafa Jatoi, the leader of the banned Pakistan People's Party (PPP) reportedly said that the Opposition's Movement for the Restoration of Democracy (MRD) was ready to wait till Aug 14, Pakistan's Independence Day, before deciding on whether to confront the elected Parliament and PM Muhammad Khan Junejo.

The reason for this change in the political atmosphere is that President Zia, at least for the moment, appears to be stepping off the stage and Junejo and his cabinet are being given more prominence. Military men are also being replaced by civilians in government appointments. For instance, Zia's close confidante, Lt Gen Mujibur Rehman recently stepped down from his post of Permanent Secretary of the Information Ministry. The members of the National Assembly, the Lower House of the bi-cameral Parliament, are becoming as vocal as the Opposition, about the need to end martial law. Even Junejo has begun to assert his rights as PM and according to sources, he recently refused to sign an ordinance on Islamic banking for legislation by decree.

However, Zia's supporters feel that democracy will come only in easy stages. They speculate that if the process is speeded up, then not only will the 11-party Opposition MRD create disturbances but the military officers will become discontented and become a destabilising factor in domestic politics. The fact that the army still plays an important role in Pakistani politics was demonstrated when Maj Gen Nek Muhammad

late appointed Director of the Intelligence Bureau, was generally held by police officers. Yet, at the same time, cabinet ministers and government officials confirm that Zia is taking a back seat and is trying to boost Junejo's image. The President recently said, "I am now a constitutional head of state and that is exactly what I want to be." However, according to his amended Constitution, he still retains constitutional powers and can use them at his discretion.

The mood being what it is in the country, the MRD has begun to re-organise itself and has decided to create a permanent organisational structure for the alliance to prepare for its next confrontation with the government. It had hoped that its call for boycott of the February elections would be widely heeded since the high general-election turnout had led to a loss of prestige. The MRD may suffer yet another setback if an Opposition emerges within the elected Parliament.

EAST BLOC

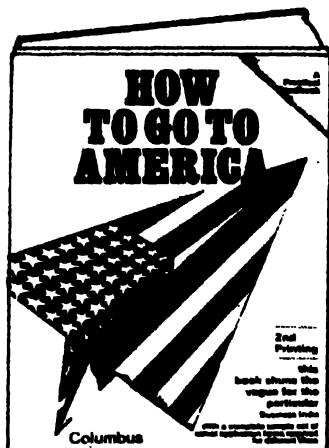
PLEDGING MILITARY SOLIDARITY

The original document was signed in 1955. Now, 30 years later the leaders of the seven-nation group, which comprises the Warsaw Pact, met again at Warsaw to renew the pact. The fresh pledge of fidelity will provide upto 30 more years of military solidarity to the Warsaw Pact.

The group had shown signs of falling apart in recent years with the removal of a firm hand from Moscow. During the last years of Leonid Brezhnev and the short spells of Yuri Andropov and Konstantin Chernenko, the East European satellites had begun to show signs of independence, especially on the economic front. The pact, however, appears to have solidified anew under the new Soviet leader Mikhail Gorbachov. He perhaps realises that Moscow will face little problem as long as it does not hamper East Europe's ability to conduct trade with the West.

Meanwhile, the Soviet Union has begun to expand its Pacific fleet. It recently held manoeuvres a few 100 miles east of Japan involving nearly three-quarters of its ships deployed in Asian waters. Work is also underway at the former US base at Cam Ranh Bay in Vietnam, which is now USSR's only warm-water port in the Pacific, and also at the submarine ports at Petropavlovsk on the Kamchatka peninsula. Moscow's Pacific fleet includes 31 nuclear missile submarines, 87 capital ships and 54 combat vessels.

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BANDUNG MEET

SUHARTO'S DIPLOMATIC GAMES

Thirty years ago, 29 newly independent nations met at Bandung and called for an end to colonial domination, non-intervention in other countries' internal matters and a halt to military alliances with either of the two superpowers. Recently, officials from 82 Asian and African countries and three national liberation movements travelled to Indonesia to attend Bandung II. It was a personal victory for Indonesia's President Suharto, who is trying to reassert Jakarta's position as a leading non-aligned nation.

This time the emphasis was on economic fundamentals. According to Suharto, "political independence does not mean much if we do not immediately fill it with national development." The 250 delegates approved a 19-point declaration which, apart from reiterating the 10 original Bandung principles of non-alignment and self-determination, also denounced South Africa's apartheid policies and attacked the "racist, brutal practices of Israel". Suharto's diplomatic skills were apparent in the manner in which he managed to skirt any mention of the present conflicts in Cambodia and Afghanistan.

The main prize of the conference, however, was that Jakarta and Peking came together for the first time since relations were suspended in 1967 when Indonesia charged China with involvement in an abortive coup attempt made two years earlier. At Bandung, Chinese Foreign Minister Wu Xueqian shook hands with Suharto, symbolically ending the 18-year hostility. Restoration of full diplomatic relations may take time but there may be more immediate economic effects. Indonesia already exports hundreds of millions of dollars worth raw materials and wood products to China via Hong Kong and Singapore, and it is expected that this will increase and the middlemen will be eliminated. The two governments have already agreed to procedures for commencing direct trade and cultural relations.

One major absentee at the conference was India's PM, Rajiv Gandhi, who was the only foreign head of state expressly invited to the conference. He could not attend the conference because of domestic problems, and consequently a lower-level delegation represented India. Of the original Bandung conference, the only two persons still politically active, Vietnam's Pham Van Dong and Cambodia's Prince Sihanouk, also kept away because of their bitter dispute over Vietnam's occupation of Cambodia. The sole surviving delegate of the original conference who did attend was the 86-year-old former Filipino Foreign Minister, Carlos P. Romula.

Indonesia, of late, has been flexing its diplomatic muscles. It has established close relations with Washington and has also been trying to mend its relations with the USSR. Further, Suharto himself is scheduled to represent the Third World at a high-profile meeting of the Food and Agricultural Organisation (FAO), in Rome in November. And to crown its successes, Indonesia has emerged as the leading compromise candidate to host the non-aligned summit in 1986, originally scheduled to be held in Iraq.

BANGLADESH ELECTIONS

ERSHAD'S VOLTE FACE

The Bangladesh upa-zila (sub-district) elections were finally held in two phases on May 16 and 20 and chairmen of 460 upa-zilas, set up by the military government under Lt Gen Ershad, were elected in the rural areas of the country. According to one estimate, 206 of the winners belonged to the government-backed Jamaat-i-Islami Party while the two main opposition parties, the Awami League and the Nationalist Party had a tally of 48 and 47 respectively. These parties had boycotted the elections, and their members had evidently stood for the elections in defiance of party directives whereby the parties had disowned them and expelled them from party candidature.

The two main opposition alliances and the Jamaat-i-Islami opposed the elections because they felt that the poll was redundant and should not be held before parliamentary elections. The elections were scheduled to be held in 1985 but Ershad had backed out at that time under civil disobedience. At the time he decided to go ahead, and sur-

prisingly many Opposition activists were in the fray for the post of Chairman, which carries considerable power. However, clashes among rival candidates caused the death of 11 people and many were injured. In many constituencies, the rivals belonged to the Jamaat-i-Islami Party since the party allowed members who wanted to contest to join in on a non-party basis.

After the elections, Ershad began informal dialogue with the mainstream Opposition on issues like political parties, parliamentary and presidential elections. The Opposition leaders, Husain Wajed and Khaleda Zia, who had been put under house arrest in March after Ershad had re-imposed martial law and banned political activity, were also released.

PHILIPPINES

ELECTIONS IN SIGHT

The "Crying Lady", so called because she had panicked and turned hysterical at the assassination of Opposition leader Benigno Aquino, Jr. on Aug 21, 1983, finally decided to speak out before the three-judge Sandiganbayan. This special court is trying 25 military officers and one civilian, named in the 457-page majority report of the Agrava panel as conspirators in the murder of Aquino, and Rolando Golman who was allegedly hired by communists to kill the former Senator, and who was himself shot minutes after he was supposed to have assassinated Aquino. The lady is Rebecca Quijano, a business woman, who was on the plane with Aquino and who says that she saw the fatal shooting through a first-class section window. She claims that she saw the man directly behind Aquino pointing a gun at him while he was descending the stairs of the aircraft and simultaneously she heard a shot. This is the first time that a civilian has testified on the murder and her testimony totally contradicts the military account of the murder. The defence, however, had no questions for her and it is surmised that questioning was avoided because defence lawyers do not want Quijano to fill in many of the details she left out of her account. According to Quijano the men accompanying Aquino were a Metrocom soldier and two Aviation Security Command (AVSECOM) personnel. The prosecution is hoping that Quijano's testimony would bring out three more witnesses who were on board the same aeroplane and had told the Agrava Commission that Aquino was still on the stairs when they had heard the first shot. The witnesses are perhaps afraid of repercussions, since among the accused is armed forces Chief of Staff Gen Fabian Ver, who is a cousin of President Ferdinand Marcos.

Meanwhile, the idea of a snap presidential vote has been revived in Manila. Some analysts feel that the CIA is trying to pressurise Marcos into holding elections before his term expired in 1987. CIA Director, William Casey, recently visited Manila and it is speculated that he held talks on the subject with the President. According to sources in Manila the US is worried about Marcos' failing health and the possibility of a chaotic struggle for power in case of his death. Some also feel that Marcos may be in favour of early elections because he wants to see his wife, Imelda, installed as President or Vice-President before his death.

POPE'S HOLLAND VISIT

MOVE TO SPREAD TERROR

The Pope was most unwelcome in Holland during his recent visit, but his charismatic charm appeared to change sentiments to some extent as opinion polls jumped from 40% of those in favour of the Pope to 70% after his visit. Although there are 5.5m Dutch Catholics—nearly 40% of the population—most of them are liberal minded.

For over two decades, many of Holland's church leaders have advocated the ordination of women as priests, and loosening the restrictions on birth control, premarital sex, divorce, homosexuality and the right of lay persons to celebrate mass. It is precisely on these issues that the Pope is uncompromising. His intention is to solidify the Vatican's control over the church and reinforce conservative, traditional values among the 800m Catholics all over the world. His visit to Holland, however, highlighted the divisive tendencies within the Catholic Church and raised the question as to whether some dissident national churches will, one day, break away from the papal fold altogether.

Shortly before his visit, a number of posters appeared in Amsterdam and other cities offering "rewards" for the assassination of the Pope. During his trip, there were ugly mass demonstrations. In Utrecht, some demonstrators dressed as priests and pregnant nuns shouted "Kill the Pope". The crowd had to be controlled by the police with tear gas and a large number of people were injured and arrested.

According to Vatican officials, the Pope had known that he would have a difficult time in Holland but had decided to make the trip out of a sense of duty. The Roman Catholic hierarchy feels that the Dutch Catholic Church strayed too far from the conservative theology promoted by the Vatican. Although he did drop some controversial passages from his prepared texts, the Pope remained firm on the main issues throughout his trip. He said that technologically advanced countries like Holland were more in need of "spiritual inspiration", and because of this, if the Church "makes unpalatable pronouncements" it does so because it feels obliged to do so. Two other countries, Luxembourg and Belgium, which the Pope visited, however, received him enthusiastically.

NEW CALEDONIA

BLUEPRINT FOR INDEPENDENCE

The French Government, under President Mitterand, has taken another stride towards independence for New Caledonia under local Kanak (Melanesian) rule. According to the new plan, announced by PM Laurent Fabius, on April 25, New Caledonia will be divided into four regions, each of which will elect its own council by universal suffrage in August this year. The council members will combine to form a territorial Congress which will decide on independence by the end of 1987. At the same time, Mitterand promised the 54,000 European residents of the islands that he would "reinforce" French military presence in the island. France has already deployed a nuclear-attack submarine, Rubis, which will be installed in the Caledonian port of Noumea. While the Kanak Socialist National Liberation Front (FLNKS) leadership generally welcomed the plan, the anti-independence pro-French Republican Party (RPCR) did not. The only part of the plan that they did like was that the independence package would give France continuing responsibility for the territory's defence and internal security.

Shortly after the announcement of the plan, there was a day-long pitched battle between the pro and anti-independence groups and curfew had to be re-imposed by the French High Commissioner, Edgar Pisani. The rioting was sparked off by a small demonstration by Kanak militants against the French proposal to create a "strategic base" in Noumea. About 6,380 gendarmes, riot police and French troops had

to be called in to quell the protests which broke out.

The Kanaks are not the only ones who oppose French military presence in the region. New Zealand's PM David Lange and Papua New Guinea's acting Foreign Minister, Tony Baka, have already objected to French nuclear presence in the Pacific and the PM of nearby Vanuatu, Walter Lini recently said that this would invite other superpower interests in the region.

VIETNAM

DISPLAY OF PYRRHIC VICTORY

Ten years ago, in March 1975, the South Vietnamese regime of Nguyen Van Thien was losing about a province a day to Hanoi's communist forces. And soon afterwards, a US helicopter whisked the last American officials out of Vietnam and ended the long bloody war, which had brought the American Goliath to its knees. Now, ten years later, Vietnam celebrated its victory with goose-stepping soldiers, left over US-made armoured personnel carriers, Soviet-built T-54 tanks, medal bedecked veterans and workers bearing a huge picture of Ho Chi Minh.

Although the show was jubilant and 400 journalists and technicians were invited from abroad to display Vietnam's victory to the world, the victory itself has proved pyrrhic. About 1,60,000 of its 1.2m strong army is at present busy trying to subdue resistance fighters in Kampuchea, while another 6,50,000 soldiers are kept on an alert along its uneasy border with China. And although Vietnam gets \$2b. in aid from the USSR each year, it is still extremely poor. The disastrous 1976-80 Five-Year Plan almost shattered the country's economy, and it was only after a year long debate, that efforts were made to lead the country towards stability. The Plans were poorly conceived and executed more by compulsion than by persuasion. To add to its problems, there were natural disasters like the floods of 1977-78 and border aggression from China and Cambodia, which brought development of some New Economic Zones (NEZs) to a grinding halt. There was also managerial incompetence which led to economic stagnation.

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HIGHER EDUCATION

SOME VIEWPOINTS

An inter-disciplinary approach to curriculum framework, student evaluation of teacher performance and vocationalisation of education. This fresh approach towards galvanising our inert system of higher education might prove to be result-oriented.

The obstacles to changing the structure of higher education are manifold. In the first place development needs can be adequately met only by making education more practical and less academic. But technical education is expensive in terms of building and equipment, and more importantly, its value has yet to be fully accepted in our country.

Another obstacle lies in the scarcity of qualified teachers in India because of the competition from government and industry, which pay higher salaries and offer better facilities. Whereas in the Philippines, Thailand and Malaya, where teachers enjoy better conditions, education is chosen as a career by a number of students. Hence a deterioration in the quality of teachers.

Universities, colleges and students are often controlled by politicians. The teacher has little control over educational issues; and syllabi and exams are outside the purview of the teacher. Consequently there is a loss of teacher-leadership and, as Edward Shils rightly puts it, Indian higher education is characterised by a "tragic waste of gifted human beings".

The third obstacle to the growth of higher education is student unrest—a phenomenon which has its roots in the general dissatisfactory state of the entire social system, including the system of education—poorly arranged course schedules leave the student with much free time but he has few opportunities for constructive activities. Again, the teachers have little contact with their students and guidance is almost lacking. Factors like scarcity of books, limited library and laboratory facilities also retard student progress. Hence their diversion in political intrigues and non-academic pursuits.

These variegated problems of higher education in India call for radical changes in the entire educational system. But these problems need to be studied in a broader perspective, with emphasis on the interrelated issues.

Some vital areas of university education, viz., teacher performance, university curricula, student/teacher policies at institutes of higher education and the so called new educational policies of the government were selected for analysis. Views of those directly dealing with academics—professors, readers, vice-chancellors and other administrators were taken into account in order to get a clear picture of the state of affairs. However, the opinions were restricted to those working in Jawaharlal Nehru University (JNU) and Delhi University (DU) two of the most prestigious institutions in India.

Teacher motivation

There is no dearth of competent teachers in the country, today. But, what is lacking is their motivation. According to Dr Abad Ahmed, Director, South Campus, DU, teachers were working in a milieu, where students were not motivated and selections were not made on merit; a sizeable number of them were teachers because they could not get any other job and, therefore, their hearts were not on teaching.

In addition, adequate facilities were not given to teachers for leading a decent life.

Dr Ahmed said, "It is difficult for a teacher to survive in Delhi on his single income; either minimise the cost or supplement his income with basic facilities like transportation, schools for children and campus housing."

Another factor which was found to hinder teacher motivation was the attitude of students. According to Dr Neera Chandhoke, Reader, Department of Political Science, DU, a majority of students were docile. The teacher was very often not just a teacher; he was the one to set question papers, the examiner and the job giver—all rolled into one. Thus the students developed a "dependence syndrome" and the teacher faced no challenge. With the result the need to update themselves was not felt by teachers.

Most lecturers even felt that there was no feasible evaluation system of teachers in Indian universities. However, when it was suggested that students were the best judges of teachers and, therefore, a system of evaluation by students could be introduced, the reactions were varied.

Commenting on methods of teacher evaluation, Dr P.L. Malhotra, Director, National Council of Educational Research and Training (NCERT), suggested that faculty members should join the students in evaluating the performance of teachers in classes. Confidential reports could be taken and fed into a computer, and the relative performance judged accordingly.

Pointing out the implications of student evaluation of teacher performance, Dr B.K. Srivastava, School of International Studies, JNU and former VC, Ravi Shankar University, Raipur, opined that students were likely to rate popularity rather than sub-

Politics for past-time? Poorly drawn up course schedules and lack of proper facilities force the students to indulge in political intrigues.



stance. Further, teachers themselves could be tempted to play to the gallery. He added that if it was to be introduced in Indian universities, there should be safeguards. Prof. Srivastava also spoke about the inadequacies in universities away from the Centre. In some universities, even basic reading materials like journals and books were not available; and lecturers could not keep abreast of the latest developments in research, he pointed out.

Teacher motivation, according to Dr. Ahmed, was partly the responsibility of the institutions concerned. The institution should see to it that merit was duly rewarded. The reward need not necessarily be monetary; it could also be psychological and social. Dr. Ahmed also emphasised inner motivation of the teacher, which could be promoted, given the right kind of leadership and environment.

Arup Banerji, Lecturer, Deshbandhu College felt that there could be a system by means of which teachers were made to respond to the felt needs of students regarding curricula, modes of assessment etc. This could be followed by a unanimous poll by students of teacher performance as was being done by most universities in the US. He also felt that models should be evolved to relate research to the felt needs of the country; this would encourage teachers to continuously conduct research work.

In some universities in the West, especially in the US, teachers did not have a permanent tenure. They were appointed on the basis of a contract, which was renewable on the basis of their performance. Talking about the feasibility of such a system in India, Dr. Krishna Sharma, Principal, Gargi College, felt that this could provide the kind of challenge—a competitive pressure—which could improve performance.

Curricula

The Science courses in DU were apparently, satisfactory enough, particularly at the graduate level. In fact, drawing a comparison with the Science curricula in American universities, V. Jamuna of Gargi College, said that students in the US were generally expected to specialise in one particular aspect of the discipline of their choice. In India, however, the courses were more generalised at the B.Sc. level, because specialisation was compulsory at the postgraduate level. But there was lack of facilities in Science colleges, although specialised institutions like the Indian Institute of Technology (IIT) or the All India Institute of Medical Sciences (AIIMS) were well equipped to train their students.

In the field of humanities, however, opinions were diverse especially on subjects like English and History. Talking

about the English course in DU, Arora pointed out that the aim of higher education was not to teach the basics of English language. But this was exactly what the teachers were doing at the pass-course level. (English is not compulsory after class-VIII but it is compulsory in the university). While the B.A. (Hons) course in English was alright, the M.A. course was not because the options were few.

In India curriculum often underwent changes; but the methodology was arbitrary and haphazard. Dr. Sharma felt that a whole year was required to debate on the modalities of a new course. There was general consensus on the need to adapt the curriculum in the national context. According to Dr. B.K. Srivastava, "We do not need to keep pace with the West in all academic subjects. We should acquire excellence in our own fields."

Commenting on the impact of curriculum, Prof. A.N. Kaul felt that although universities did revise courses, off and on, it did not necessarily result in raising the quality of education. What was more important was to motivate students; raising standards would not necessarily motivate them."

Emphasising on the need for an interdisciplinary approach, Dr. P.L. Malhotra felt that a drastic change was required in the curriculum of the undergraduate courses. A three-year B.A. course was redundant. It could easily be reduced to two years, he suggested. In addition, the honours students received a lop-sided education,

because they specialised in only one subject and learnt nothing about anything else, because the subsidiary course was a residual course. He favoured the kind of tripos system being adopted in Oxford and Cambridge. Prof. Abad Ahmad, on the other hand, was in favour of a structural change and stressed on vocationalisation of education. "Courses should be framed in collaboration with the industry," he reiterated. "Starting a new course or an option, would not prove helpful."

However, vocationalisation was not meant for the postgraduate level. At this level, there should be a kind of applied-discipline. A postgraduate in Botany or Zoology in India was only fit to be a teacher, because these academic streams were removed from life. According to Prof. Ahmad it is more important to apply these disciplines to solving real life problems like environmental pollution; crime, lack of productivity, the energy crisis etc.

Student-teacher politics

On the question of student-teacher politics, there was a unanimity of views at all the academic levels. "In any society, which is changing from a feudal to a democratic set-up, it is inevitable that groups will be organised and political influences will come up", Dr. Ahmad said, when asked about the existence of student-teacher politics in India. Universities were places where students acquired an awareness of the social processes and institutions and in this context, politicisation of students was a good sign.

VARSITY ENROLMENT ON THE EBB

Even as there is talk of delinking jobs from degrees, the average annual rate of growth in enrolment in Indian universities is on the decline. During the decade 1974-75 to 1983-84 there has been an enrolment decline upto 4.2% from 10.3% during the previous decade—1964-65 to 1973-74. Nevertheless the total enrolment, in absolute terms, rose from 9.50 lakhs in 1964-65 to 33.59 lakhs in 1983-84.

The average enrolment rate in universities worked out rather low at 3.9% in 1980-81, though the enrolment went up from 26.49 lakhs in 1979-80 to 27.52 lakhs in 1980-81. The enrolment rate went up sharply to 7.3% in 1981-82 but declined to 6.1% in the subsequent year. Again in 1983-84, the rate went up to 7.2% when the enrolment in universities touched 33.59 lakhs.

Among the various states/Union territories the enrolment rate in universities during 1983-84 was highest at 26.3% in Meghalaya and Nagaland,

followed by Manipur (22.9%); Bihar (15.4%); HP (12.4%); Kerala (12.1%); Orissa (12%); Karnataka (11.9%) and Andhra Pradesh (11.8%). During 1983-84, as many as nine states had an enrolment rate lower than the average rate of 7.2%.

While there was an increase in the rate of enrolment in the universities in 12 states, the remaining eight states showed a lower rate of enrolment during the same period as compared to the previous year.

The literacy rate in all the states went up uniformly during the last three decades. According to the 1981, census the literacy rate was highest in Kerala at 70.4% followed by Maharashtra at 47.1%, Tamil Nadu at 46.8% and Gujarat at 43.7%. Among the Union territories, the literacy rate was highest in Chandigarh at 64.8%, followed by Delhi (61.5%), Mizoram (59%), Goa, Daman & Diu (56.1%).

All the states except West Bengal have literacy rates below the national average.

MOONIS RAZA DEVOUT EDUCATIONIST

Prof Moonis Raza who took over recently as the new Vice-Chancellor, University of Delhi, is a man of letters. A former professor in the Centre for the Study of Regional Development (JNU), Prof Raza carries with him a rich teaching experience of 34 long years, in reputed educational institutions like Aligarh Muslim University and the Regional College of Engineering, Srinagar.

Prof Raza's views on higher education cover a wide spectrum of this crucial issue.

Excerpts from an interview with him:

How do you view higher education in India?

I feel that much can be done to improve it. At one level there should be, and to some extent there is, an international network of major centres, so that knowledge does not get fossilised. On the other hand, there should be a national network of good departments in the country. There should also be a third network where one can interact with college departments and school departments. While the first network is working very well, the second is working at a lesser level of efficiency and the third is not working at all. An attempt should be made to see that the second becomes more significant and the third becomes operational.

A second problem is that teaching has become a residual activity in our country. The number of workdays when teaching is done is becoming smaller and smaller. This can partly be attributed to a general fall in work ethics in the country as a whole. In the university itself, part of the fall may be attributed to the prevailing service conditions. Colleges sometimes do not even provide any place to sit; so why should the teachers linger on in the colleges after classes? It would be better to provide cubicles to teachers instead of having a general staff room. The lack of work ethics among teachers can also be partly attributed to the lack of concern on the part of the students, who do not take education seriously. All this has combined to create a situation, in parts of India, where the prophecy of Marx has



come true—he spoke of a classless society—and already a situation exists where classes are not held at all.

How can one improve the situation?

One cannot think of any reform which would bring the entire system under its influence. Reforms should be tested in terms of how many people it is able to transform. But, in the final analysis, professional ethics has to be developed by the teachers themselves.

Do you feel that evaluation of teachers by students would help?

It is important, in this context, to involve college teachers in research work. Research is the best way of updating knowledge. Mere teaching does not add to your knowledge. What is happening in most places is that there is no generation of knowledge through research. I would like to build a system where lecturers in colleges and universities would combine in groups to generate research. The inter-disciplinary approach is important. For instance, there is no unit which studies the problem of urbanisation. People can be brought in from various fields—education, health, transport, sociology, geography, economics—to do research on urbanisation.

Do you feel that the university curriculum is adequate?

University curricula, by their very nature, cannot be uniform or similar. There are syllabi which are as good as any in the world. But there are others which are rooted

in the latter part of the 19th century. The first is increasingly replacing the second kind but the gap is still large. The fact is there are different kinds of students and one has to cater to all.

How do you view student politics?

There can be politics which is good and politics which is bad. Students and teachers should take part in the politics of integration. I have a vague feeling that our students are becoming increasingly non-political. Big things are happening in the country but the students are not worried. They are more interested in holding strikes either to postpone exams or reduce bus rates. These are not political questions. Actually, depoliticisation of the young is not good.

What do you feel about party politics at the university level?

Much depends on the attitude of political parties vis-a-vis academics. Education is a residual element in party platforms; it is an element of politics. Using politics for nefarious purposes should not be encouraged.

policies on education which are being talked about?

I am very impressed by the desire of the PM to have an educational policy. There should be a stronger link between education and the world of work and a far greater emphasis on non-formal education. The level of the system should also be raised. Defining degrees from jobs is the crucial operational strategy. One would like to wait and see what formal shape the policy takes.

Should there be a link between universities and industries?

There should be a bi-directional symbiosis between the two. The trouble is that Indian capitalists do not invest in education.

Do you feel that the quality of education would improve if the new policies are implemented?

Yes. In India, the theory is that work corrupts knowledge and vice-versa. The Vedas and the plough have long been differentiated. But this theory is wrong. Knowledge comes from work and work from knowledge—there is a bi-directional relationship between work and knowledge.

S.B.

However, Prof Kaul pointed out that "what people are unhappy with is the abuse and vulgarisation of politics by students and teachers who are nowadays bending politics to their personal ends. There is partisanship and factionalism and this is a negative trend which is to be denounced. "Political awareness was one thing and it was a positive trend which should be encouraged; but corrupt politics leads to a lack of idealism which means eating up the vitals of the country". Dr Chandhoke asserted.

Banning student elections was definitely not viewed as a feasible solution to this problem and the blame was pinned on to the political parties, who, for their own ends, manipulated students, fed them with funds, and helped in the degeneration

of student politics.

New educational policies

The new set of educational policies introduced by the government were considered mere experiments in changing the old system. The idea of delinking degrees from jobs had assumed the nature of a cliché long ago and had become old hash, according to Dr Krishna Sharma. She said, "the rate of industrial growth will decide the issue faster than educational planning." Dr Abad Ahmad, too, felt that the idea was highly simplistic: "Do you think that people will stop coming to universities if they delink degrees? When they do not get jobs, they will come back to the university, where they get respect. Students have a status and certain privileges in society and carry the hope of a future career."

On the other hand, Dr P.N. Srivastava and Dr P.L. Malhotra were more optimistic about the new educational policies. According to Dr P.N. Srivastava only those who were really committed should go on for higher education. If degrees were delinked the uncommitted ones will automatically start taking competitive exams at an earlier stage. In this context, educational degrees, which have no value now, would regain their lost value.

Voicing the opinion of university professionals of the less elite universities, Dr Srivastava remarked, "The 21st century? For whom? How many will be benefited? The government cannot provide chalks and blackboards to village schools, but it talks of computers to raise the standards of schools."

Practice Tests

In preparing these tests, we have tried to visualise the questions you are likely to face in your
been taken to frame questions which are of the same standard as those you'll e

Great care has

Rating: Evaluate your performance on the basis of the following score-card:

100 questions in 60 minutes—Excellent

60 questions in 60 minutes—Good

50 questions in 60 minutes—Fair

35 questions in 60 minutes—Poor

Tips: 1. Do not waste time over questions you are not sure about. 2. Give the proper thought before choosing the answers. 3. Read the directions carefully before answering the questions. 4. Do not try to guess the answer.

TEST OF REASONING

BY P. R. SAXENA

FOR PO, SCRA, GIC (AAO), CLERKS' GDE...

Reasoning tests constitute an essential section of exams like the SCRA, GIC (Assistant Administrative Officers), Clerk's Grade of the Regional Recruitment Board, bank POs. The following questions have been selected to give you a fair idea of questions you are likely to encounter in this section.

Time: 13 minutes—half a minute for each question. Scores: 1. Give yourself one mark for each correct answer. 2. Deduct one mark for each wrong answer. 3. Rate yourself as follows:

Excellent..... 22-25 Very good 18-21
Good 14-17 Poor Below 14

DIRECTION: For each of the following questions, tick mark the choice that best answers the questions. Answers are given at the end of these tests.

1. If ten pie cer means Ram eats apples; Ket ditch pie means apples are good; then Ket sun means apples are red and Ket sun means fresh apples are red, then which word means red?

(a) Ten (b) Pie
(c) Ket (d) Ditch
(e) Sun

In the above question which statement is superfluous?

(a) Ten pie cer
(b) Ket ditch pie
(c) Sun pie ket
(d) Ditch pie ket sun
(e) Ten pie cer & ditch pie ket sun.

If CALCUTTA is written as XZOX-FGGZ, then the word BOMBAY will be written as

(a) YLNXZB (b) YLNYXB
(c) YLNYZA (d) YLNYZB
(e) BZYNLY

Complete the series

a a - - - a a a a - - - a a a a - b - a

(a) a b a b b b (b) b a b a a a
(c) b b b a b b (d) a a a a b b
(e) b b b b b a

5. If > means 'equal to', < means 'not equal to', = means 'greater than' and + means 'smaller than' and

(i) A > B (ii) B = C (iii) C + A means

(a) C > A (b) C < A
(c) C = A (d) A + B > 2C
(e) None of the above

6. Ram starts moving towards east. After going 3 km he turns left and walks 4 km further. Then he starts moving in the south-west direction and covers a distance of 5 km. How far is he from the starting point now?

(a) 12 km (b) 9 km
(c) 10 km
(d) He is back at the starting point
(e) None of the above

Directions: In questions 7-9, certain names are given, but their spellings have got jumbled up. Indicate the correct answers from the given options.

7. Name of a monument
(a) AMJLTHAA (b) TMRRIASA
(c) IRSAULATA
(d) YTOOK
(e) NYAMAARA

8. Name of an Indian city

(a) YTOOK
(b) NYAMAARA
(c) TMRRIASA
(d) AMJLTHAA
(e) IRSAULATA

Name of a book

(a) IRSAULATA
(b) YTOOK
(c) TMRRIASA
(d) AMJLTHAA
(e) NYAMAARA

10. Five girls are sitting in a row, with their backs towards you such, that Sheela is on the right of Birma; Ritu is next to Sheela and is on her left. Geeta is on the left of Birma; Beena is on the left of Birma but on the right of Geeta. Who is sitting in the centre?

(a) Birma (b) Ritu
(c) Sheela (d) Beena
(e) Geeta

11. P is the father-in-law of the wife of the brother of Q. What is P's relation to Q?

(a) Father-in-law (b) Maternal uncle
(c) Father (d) Son-in-law
(e) Brother-in-law

12. If GANGA is written as DJNDJ, then WATCH would be written as

(a) ZDTFK (b) DZTFK
(c) ZDTKF (d) DTZKF
(e) KFTDZ

13. If LONDON is written as LKKAIL then PERIOD would be written as

(a) LAFOMB (b) LAFOBM
(c) LAOFMB (d) LAOFBM
(e) ALOFMB

14. There are five boys named John, Jack, James, Brown and Tony. Given that

i) Jack is elder to John
ii) James is elder to Jack
iii) Brown is elder to Tony
iv) Jack is elder to Brown
v) Brown is younger to John
Who is the youngest of the five?
(a) John (b) Brown
(c) Tony (d) Jack
(e) James

15. Complete the following series

s-q-s-qq-s-qq-s
(a) qssqssqs (b) sqssssqs
(c) sqssssss (d) sqqqssss
(e) rqrarr

is given. On the basis of this statement, two conclusions are drawn. You have to mark:

- (a) If only the first conclusion can be possibly drawn
- (b) If only the second conclusion can be possibly drawn
- (c) If both the conclusions can be possibly drawn
- (d) If either of the two conclusions can be possibly drawn
- (e) If neither of the conclusions can be possibly drawn

16. No tree is a mountain.

Conclusions:

- I Some mountains may be trees
- II Most of the mountains are trees

17. All bald men have hair.

Conclusions:

- I All men with hair are bald
- II All men with hair are not necessarily bald

Directions: In questions 18-20, two statements are given. On the basis of these two statements a conclusion is drawn.

You have to mark:

- (a) If the conclusion is definitely true in the light of given facts
- (b) If the conclusion is not definitely true but probably true
- (c) If it is not possible to infer a conclusion on the basis of given

18. I All elephants are white.
II Some white things are made of milk.

Conclusion: All elephants are necessarily made of milk.

19. I All cows are non-vegetarians.

II All buffaloes are non-vegetarians.

Conclusion: All cows are buffaloes.

20. I All boats fly in the air.

II Some aeroplanes fly in the air.

Conclusion: Some boats as well as some aeroplanes fly in the air.

Directions: In questions 21-22 a statement is given and on the basis of this statement two assumptions are made. You have to mark:

- (a) If the first assumption is implicit in the statement
- (b) If the second assumption is implicit
- (c) If both assumptions are implicit
- (d) If either of the assumptions is implicit
- (e) If neither of the assumptions is implicit

21. The Prime Minister of India is responsible to the Parliament
Assumption I: India is a parliamentary democracy. Assumption II: The Prime Minister of India is elected every five years.

Nobel Prize in Physics

Assumption I: Nobel Prizes are given in the memory of Sir Alfred Nobel.

Assumption II: C.V. Raman was the first person to get the Nobel Prize in Physics.

Directions: In questions 23-25 a statement is given, followed by two arguments which either favour or oppose the statement. You have to mark:

- (a) If the first argument is strong
- (b) If the second argument is strong
- (c) If both arguments are strong
- (d) If either of the two arguments is strong
- (e) If neither of the two arguments is strong

23. Should public schools be abolished?
Argument I: No, there is already a shortage of schools in India

Argument II: Yes, they create snobs

24. Should television be fully commercialised?

Argument I: Yes, it will be a new step

Argument II: No, government should have a control over the mass media

25. Should Test matches be played in red clothes rather than white?

Argument I: Yes, red colour has a higher visibility compared to white

Argument II: No, nobody has ever attempted this

BSRB (PO) Exam, Aug '84

GENERAL AWARENESS

Questions published in this section appeared in the BSRB (Baroda) PO Exam held on Aug 12, 1984. These are based on the candidates' memory as they are not permitted to take their question papers out of the exam hall. Though we have compiled these questions as close to the original as possible, we take no responsibility for any discrepancies.

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the question. Answers are given at the end of these tests.

1. The state producing the highest yield of wheat and rice per hectare is
 - (a) Punjab
 - (b) Haryana
 - (c) UP
 - (d) Maharashtra
 - (e) MP.
2. Filmotsav 1984 was held in
 - (a) Delhi
 - (b) Bombay
 - (c) Calcutta
 - (d) Madras
 - (e) Bangalore
3. The Best Actor Award for 1983 was won by
 - (a) Kamalhasan
 - (b) Amitabh Bachchan
 - (c) Kulbhushan Kharbada
 - (d) Om Puri
 - (e) None of the above
4. The Jnanpith Award for 1982 was given to
 - (a) Amrita Pritam

- (b) Mahadevi Verma
 - (c) Shivram Karanth
 - (d) Nirad C. Chaudhuri
 - (e) None of the above
5. The Kalpakkam project in Madras is unique because
 - (a) It is the first of its kind to produce atomic energy
 - (b) It is the first FBTR
 - (c) It is the first reactor to convert power into electricity
 - (d) It is the first project completed indigenously
 - (e) None of the above
 6. The only state having a Congress (I) government is
 - (a) Karnataka
 - (b) Andhra Pradesh
 - (c) J & K
 - (d) Maharashtra

- (e) None of the above
7. The Silicon Trophy is awarded to
 - (a) Silk producing industries
 - (b) Industries producing defence weapons
 - (c) Industries producing plastic goods
 - (d) Industries which promote maximum exports
 - (e) None of the above
 8. Kerala was opposed to the Silent Valley Project because of the
 - (a) Ecological conditions prevalent in the state
 - (b) Expected wastage of funds
 - (c) Large number of projects already in the state
 - (d) Priority being given to other projects
 - (e) None of the above
 9. Diamond Jubilee is celebrated on— anniversary.
 - (a) 25th
 - (b) 50th
 - (c) 60th
 - (d) 75th
 - (e) None of the above
 10. The Indian Mountaineering Foundation recently celebrated its
 - (a) Silver jubilee
 - (b) Golden jubilee
 - (c) Diamond jubilee
 - (d) Platinum jubilee
 - (e) None of the above
 11. The Templeton Award winner, Alexander Solzhenitsyn, is
 - (a) A trade union leader in GDR

- (b) A famous actor in Hollywood
(c) A Soviet writer in exile
(d) Leader of Third World countries
(e) None of the above
12. Teacher's Day is celebrated every year on
(a) Nov 14 (b) May 1
(c) Sep 5 (d) Oct 30
(e) None of the above
13. The self-styled leader of Khalistan is
(a) Gurcharan Singh Tohra
(b) Harchand Singh Longowal
(c) Jaidev Singh Talwandi
(d) Jagjit Singh Chauhan
(e) Amrik Singh
14. Bismillah Khan is associated with
(a) Santoor (b) Sarod
(c) Shehnai (d) Flute
(e) Tabla
15. The 1981 Commonwealth Summit was held in
(a) Melbourne (b) London
(c) Colombo (d) New Delhi
(e) Belgrade
16. The conclave of opposition parties held in Srinagar was—of its kind.
(a) First (b) Second
(c) Third (d) Fourth
(e) Fifth
17. The Russian Revolution took place in the year
(a) 1914 (b) 1917
(c) 1918 (d) 1928
(e) 1932
18. Beirut is in
(a) Syria (b) Lebanon
(c) Israel (d) Iran
(e) Iraq
19. Which one of the following is not a news agency?
(a) PTI (b) UNI
(c) AIR (d) ENS
(e) None of the above
20. The Sri Lankan opposition leader Sirimavo Bandaranaike belongs to the
(a) Tamil United Liberation Front
(b) Sri Lanka Freedom Party
(c) United National Party
(d) National Labour Party
(e) None of the above
21. The world's first test-tube quadruplet was born in
(a) London (b) Vienna
(c) New York (d) Hamburg
(e) Melbourne
22. The B.D. Goenka Award has been recently instituted for
(a) Science (b) Economics
(c) Journalism
(d) Literary criticism
(e) None of the above
23. William Golding won the Nobel Prize for his work in
(a) Medicine (b) Economics
(c) Literature (d) Chemistry
(e) Physics
24. The book *Morarji Papers: Fall Of*
- Janata Government* is written by.
(a) Kuldeep Nayar
(b) Khushwant Singh
(c) Seymour Hersh
(d) Arun Shourie
(e) Arun Gandhi
25. M.S. Subbalakshmi is a famous
(a) Singer (b) Dancer
(c) Artist (d) Actress
(e) None of the above
26. Find the odd-one out:
(a) Venus (b) Mercury
(c) Moon (d) Jupiter
(e) Saturn
27. Dr Raja Ramanna is associated with
(a) Economics (b) Medicine
(c) Journalism (d) Agriculture
(e) None of the above
28. 'Eelam Tigers' group is in
(a) Sri Lanka (b) Bangladesh
(c) Pakistan (d) China
(e) India
29. The Civil Disobedience Movement was recently directed by
(a) Pakistan People's Party
(b) Jamat-E-Islam
(c) Student's Federation/Union
(d) Movement for Restoration of Democracy
(e) None of the above
30. Surjit Singh, who recently died in a motor accident, was
(a) A famous cricket player
(b) A famous hockey player
(c) A famous doctor
(d) An artist
(e) None of the above
31. The country with the highest GNP is
(a) Kuwait (b) Saudi Arabia
(c) USA (d) France
(e) Canada
32. For an agricultural country like India the main source of energy is
(a) Solar energy and gobar gas
(b) Coal and oil
(c) Oil and tar
(d) Gobar gas and oil
(e) None of the above
33. Which of the following parties formed the National Democratic Alliance alongwith Lok Dal?
(a) Janata Party
(b) AIADMK
(c) Telugu Desam
(d) Bharatiya Janata Party
(e) CIP
34. Find the odd one out:
(a) BSF (b) CRP
(c) Traffic Police (d) NCC
(e) State Police
35. The Sarkaria Commission deals with
(a) Centre-state relations
(b) Irrigation
(c) Distribution of energy
(d) Disbursement of funds
(e) None of the above
36. Chandigarh was designed and planned by an architect called
(a) Le Corbusier (b) Lysant
(c) Satish Gujrat (d) L. Kesting
(e) None of the above
37. The Tamil terrorists are demanding
(a) Separate state
(b) Seats in the forthcoming elections
(c) Religious rights
(d) More powers in administration
(e) None of the above
38. Navroze is celebrated by
(a) Buddhists (b) Muslims
(c) Jews (d) Sindhis
(e) None of the above
39. A place known for its knitwear products, machine tool products and also called Mini-Switzerland is
(a) Ludhiana (b) Kanpur
(c) Ahmedabad (d) Bangalore
(e) Lucknow
40. Article 25 pertains to
(a) Freedom of religion
(b) Judiciary systems
(c) COFEPOSA
(d) National Security Act
(e) None of the above
41. The first Sanskrit film made in India is
(a) *Adi Shankaracharya*
(b) *Meghdoot*
(c) *Shakuntalam*
(d) *Shankarabharanam*
(e) None of the above
42. Section 144 Cr. P.C. deals with
(a) Copyright Act
(b) Ban on Assembly of five or more persons
(c) Ban on usage of certain trade marks
(d) Ban on smuggling activities
(e) None of the above
43. The Sudha Goel case is known for
(a) Rape (b) Dowry death
(c) Abduction (d) Smuggling
(e) None of the above
44. Benazir Bhutto, daughter of the assassinated leader, Zulfikar Ali Bhutto was permitted by the Pakistan Government recently
(a) To see her ailing mother in London
(b) To unite Pakistan Peoples' Party
(c) To help the Movement for Restoration of Democracy
(d) To go abroad for treatment
(e) None of the above
45. Michael Ferreira is a famous player of
(a) Billiards (b) Table tennis
(c) Lawn tennis (d) Snooker
(e) Squash
46. —is/are an inexhaustible source of energy.
(a) Sun (b) Minerals
(c) Coal (d) Gobar Gas
(e) Petroleum and oil
47. The country with the lowest expenditure on defence is
(a) India (b) Pakistan
(c) USA (d) France
(e) China

recently a two-storey building called 'Akashdeep' collapsed on the railway tracks in

- (a) Bombay (b) Delhi
(c) Madras (d) Calcutta
(e) None of the above
- 49 Find the odd one out:
(a) BARC (b) ISRO
(c) IARI (d) CSIR

50. To promote one's relative to get favours is called
(a) Chauvinism (b) Nepotism
(c) Communism (d) Socialism
(e) None of the above

Compiled by KULKARNI & RAJYASHREE
Restructured by S.K

SBI (PO) Exam, Oct '84

GENERAL AWARENESS

Questions published in this section appeared in the General Awareness Paper of the SBI (PO) Exam, held on Oct 28, 1984. The questions are based on the candidates' memory as they are not permitted to take the papers out of the exam hall. Though we have completed these questions as close to the original as possible we take no responsibility for the discrepancies which may have crept in.

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the questions. Answers are given at the end of these tests.

1. Recently the Merdeka Cup was won by
(a) South Korea (b) North Korea
(c) China (d) Japan
(e) Indonesia
2. In the recently held cricket match West Indies defeated England by
(a) 5-0 (b) 3-0
(c) 2-1 (d) 6-2
(e) 8-4
3. In the US men's singles open tennis championship, John McEnroe defeated
(a) Ivan Lendl (b) Jimmy Connors
(c) Mats Wilander (d) Pat Cash
(e) None of the above
4. Gerontology is the study of
(a) Old age (b) Bones
(c) Teeth (d) Fossils
(e) None of the above
5. Biopsy is
(a) The study of living tissues
(b) Operation of the dead body
(c) The treatment of kidney
(d) Functions of lungs
(e) None of the above
6. Vitamin K is good for
(a) Blood clotting
(b) Removing night blindness
(c) Removing scurvy
(d) Treating beri-beri
(e) None of the above
7. The term of the newly introduced deposit scheme is
(a) 5 years (b) 4 years
(c) 7 years (d) 6 years
(e) 10 years
8. Recently Balghat was in the news because
(a) Some passengers from a bus were killed
(b) It was here that oil caught fire and caused heavy losses to Indian Oil Corporation (IOC)
(c) An important international conference was held here
(d) A train derailed here
(e) It is a historical place
9. The Impact India scheme is associated with
(a) Popularising science
(b) Drawing people's attention towards malnourished and handicapped children
(c) Green Revolution
(d) Abolishing unemployment
(e) None of the above
10. India will get from Aid India
(a) \$1000b (b) \$2000b
(c) \$3000b (d) \$4000b
(e) \$5500b
11. The Ramon Magsaysay Award for 1984 went to
(a) R.K. Laxman
(b) Mahadevi Verma
(c) Sudhir Dhar
(d) Arun Gandhi
(e) None of the above
12. The Pulitzer Prize is given for
(a) Literature (b) Journalism
(c) Peace (d) Science
(e) Social Work
13. Piloo Modi was a
(a) Politician (b) Writer
(c) Sculptor (d) Philanthropist
(e) Player
14. Satish Gujral is a
(a) Painter (b) Artist
(c) Actor (d) Musician
(e) Writer
15. Which of the following planets does not have a satellite?
(a) Venus (b) Mars
(c) Jupiter (d) Pluto
(e) Neptune
16. Bacteria (a) Bacteria (b) Virus
(c) Mosquitoes (d) Rats
(e) None of the above
17. Apartheid means
(a) Discrimination on the basis of race
(b) Discrimination on the basis of colour
(c) Religious discrimination
(d) Freedom of religion
(e) None of the above
18. Beg Commission is associated with
(a) Backward castes
(b) Scheduled castes
(c) Centre-state relations
(d) Settling the state controversy
(e) Minorities in India
19. The headquarters of the recently inaugurated Southern Air Command are at
(a) Cochin (b) Trivandrum
(c) Visakhapatnam (d) Madras
(e) Bangalore
20. The Foreign Secretary of India is
(a) K. Natwar Singh
(b) Ramesh Bhandari
(c) M.K. Rasgotra
(d) Ashok Malhotra
21. Before being selected as Air Chief Marshal, L.M. Katre was
(a) Chairman of HAL
(b) Deputy Chief of Air Staff
(c) Director-General of Police
(d) Governor of Punjab
(e) None of the above
22. K.T. Satarawala before being appointed Governor of Punjab was the
(a) Lt Governor of Goa
(b) A Union minister
(c) Governor of Andhra Pradesh
(d) Governor of J & K
(e) None of the above
23. 'BIT' is a term used in
(a) Computer (b) Science
(c) Medicine (d) Politics
(e) None of the above
24. The best feature film of 1984 was
(a) *Adi Shankaracharya*
(b) *Ardh Satya*
(c) *Khandhar*
(d) *Vidhata*
(e) None of the above
25. Bachendri Pal was recently in the news because
(a) She topped the IAS
(b) She is the first Indian woman to scale Mt Everest
(c) She won a Lok Sabha seat in the by-elections
(d) None of the above
26. The Chairman of the Indian Space Research Organisation (ISRO) is
(a) Prof U.R. Rao
(b) Satish Dhawan
(c) Raja Ramanna
(d) Prof Kundan Singh
(e) Rakesh Sharma
27. The USSR boycotted the Los Angeles

- Olympics because**
- (a) The US Government did not permit the USSR attache to enter the nation
(b) The US Government did not assure the security of USSR players
(c) The US Government had earlier boycotted the Moscow Olympics
(d) The US Government is interfering with Nicaragua
(e) For no reason
28. Which of the following nations did not take part in the Los Angeles Olympics?
(a) Czechoslovakia (b) Algeria
(c) West Germany (d) Canada
(e) China
29. Which of these nations did not take part in the England Summit of Economic Development?
(a) America (b) Japan
(c) France (d) West Germany
(e) None of the above
30. Walter Mondale, President Reagan's rival in the US Presidential elections, was
(a) Vice-President of America
(b) US Ambassador to India
(c) US Foreign Secretary
(d) An eminent scientist
(e) None of the above
31. Four Opposition CMs walked out of the National Development Council (NDC) to protest against the
(a) Toppling of Abdullah's government
(b) Toppling of N.T. Rama Rao's government
(c) Centre's discrimination against non-Congress (I) states
(d) Punjab problem
(e) None of the above
32. Dr Adam Malik was the
(a) Vice-President of America
(b) Vice-President of Indonesia
(c) General Secretary of the Arab League
(d) Pakistan's permanent representative at the UN
(e) None of the above
33. The Conference of Appellate judges was held at
(a) Delhi (b) Tokyo
(c) London (d) Brussels
(e) New York
34. Who among the following shared the Nobel Prize with S. Chandra Shekhar?
(a) William Golding
(b) Henry Taube
(c) William Fowler
(d) Barbara Ward
(e) None of the above
35. A.P. Sharma resigned as West Bengal Governor
(a) To contest a Lok Sabha election from Bihar
(b) Because he was bound to do so
(c) Because he wanted to be a religious leader
(d) Because he was not getting along with the West Bengal CM
(e) For no reason
36. North-South dialogue means
(a) Talks between developed nations
(b) Talks between the developed and developing nations
(c) North Pole and South Pole
(d) None of the above
37. "All men are equal but some are more equal than others." Who said this?
(a) G.B. Shaw (b) George Orwell
(c) Walt Whitman (d) W. Golding
(e) Gunnar Myrdal
38. The public sector in 1983-84 kept India at a loss of Rs
(a) 106.77 crores
(b) 700 crores
(c) 607 crores
(d) 30 crores
(e) None of the above
39. The Farakka water accord is between
(a) India and Bangladesh
(b) India and Pakistan
(c) India and Nepal
(d) Bhutan and Nepal
(e) India and Burma
40. Recently the dockworkers went on a strike because
(a) They wanted more leave
(b) They wanted increased salary
(c) They wanted to lessen their duty hours
(d) They wanted more DRA, HRA
(e) They were insulted
41. Which of the following books is wrongly paired?
(a) *Asian Drama*-Gunnar Myrdal
(b) *Shame*-Salman Rushdie
(c) *The Price Of Power*-Hersh
(d) *Hotel*-John Ruskin
(e) *Airport*-Hailey
42. The Concorde is
(a) A nuclear device
(b) An American spacecraft
(c) A supersonic aircraft
(d) A musical instrument
(e) None of the above
43. Entomology is the study of
(a) Birds (b) Plants
(c) Insects (d) Worms
(e) Fungi
44. According to a study by the Foundation for Organisation Research (FORE), the most sought after job in India is
(a) Commercial banking
(b) IAS
(c) Public enterprise
(d) Private enterprise
(e) None of the above
45. The 8th Finance Commission provided for enhancement of the state's share of Union excise duties to
(a) 33% (b) 42%
(c) 45% (d) 47%
(e) 50%
46. The Emigration Act of 1983 deals with
(a) Recruitment of all Indian workers for foreign employment through the government
(b) Persons going abroad for higher studies
(c) The problem of refugees from Bangladesh
(d) Emigration of Indian scientists to foreign countries
(e) None of the above
47. Trace the correct pair
(a) Ravi Shankar—Flute
(b) Hari Prasad Chaurasia—Sitar
(c) Vilayat Khan—Tabla
(d) Bismillah Khan—Shehnai
(e) Ustad Amjad Ali Khan—Piano
- Compiled by MOHD HARUN KHAN & SUDHIR KUMAR.
Restructured by S K

English

BY THE AARBEEES

FOR ASST'S GDE, SCRA, GIC (AAO)...

This section will help you test your knowledge of the English language and eliminate weaknesses, if any.

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the questions. Answers are given at the end of these tests.

READING COMPREHENSION

1. Read the following passage carefully and answer the questions that follow by choosing the best alternative:

To achieve a continuous improvement in the quality of the environment demands perception, education, economic strength, research, plus policies and administration geared to the right aims. A process of con-

stant appraisal and adjustment is necessary, for as the scope of existing problems is reduced new ones will arise. Fresh discoveries will bring fresh difficulties—and will always do so. As Goethe said, "Every solution of a problem is a new problem."

Of first importance is the capacity to perceive the essentials of society's existen-

ce, to be able to analyse the factors that create and enhance the environment and to relate these to the contemporary situation. If people are to understand, they must be offered ideas which widen their horizons; ideas to excite them to an awareness of a deeper purpose in their living and to a new relationship with their environment. To challenge is to find and capture these ideas and to put them over with élan to hold and inspire people.

Although much remains to be understood, we do have a sufficient basis of knowledge and ideas to make it possible for us to create a new fabric for man and his physical environment. All the time we must remember that man is both part of nature and yet able to influence its processes; that he, like other animals, needs space and repose; and that all his actions have far-reaching effects on other living creatures.

Man has made vast changes on the earth with relatively primitive tools and limited knowledge. What is he going to achieve with the vast power now at his command and the explosion of knowledge under way? Here it is important to note that, while between 1840 and 1940, man created better food, clothing, housing and hygiene for millions, he also contaminated the land, air, rivers, and sea and eliminated much wild life. Now we believe that he need not have done so, that in the next century greater progress can be achieved without accompanying despoilation, and the old dereliction and waste can be cleared away. Such a creative approach requires the perception of the significant and lasting features of the national inheritance. These are, of course, interrelated. As understanding increases, more values will be identified and cherished.

—Robert Arvill, *Man And Environment Crisis And Strategy Of Choice*

1. Improvement of environment can be brought about by
 - (a) the people through their own efforts
 - (b) the combined efforts of a large number of agencies
 - (c) educationists, economists and researchers following purposeful policies
 - (d) adopting suitable administrative measures
2. Goethe's saying, "every solution of a problem is a new problem" implies that
 - (a) there is need to remain ever ready to tackle new problems
 - (b) no problem can ever be solved
 - (c) there are no solutions, only problems
 - (d) men lack wisdom to find permanent solutions
3. The need to offer ideas, capable of widening the people's horizons, is
 - (a) cause for despair

- (b) the only way to create an understanding of the environment
- (c) a kind of challenge
- (d) an exciting prospect

4. In the last paragraph the author views the future with

- (a) despair
 - (b) hope
 - (c) apprehension
 - (d) indifference
5. Despoilation means
- (a) making things worse
 - (b) destruction
 - (c) making people immoral
 - (d) plundering

II. Make a precis of the following passage:

Real praise—the sincere compliment—is probably the most useful social tool of all. It's the valued gold coin of our conversation. Yet today it is in danger of losing its brightness. For, it is greatly misused and not properly exchanged.

What is a true compliment? It's one that benefits both giver and receiver. Several years ago, for example, a house painter and his young assistant arrived to paint our house. The older man was wearing shiny new shoes. My father-in-law stood watching them. As the man started skillfully applying paint, my father-in-law, showing his approval, said to the boy, "Son, when you can show up on the job to paint a house wearing new shoes, you will be master of your trade." The painter smiled happily, and our house received its finest paint job.

We all like to have our sense of personal worth built up or pointed out. And when one expert adds to another's sense of dignity and speaks favourably of his skill, he is offering a compliment of the highest and rarest kind. Sitting with a group of editors, I once overheard the perfect example of this type. "He's the only editor I know," a fellow remarked, "who edits copy with a pen." It meant that the editor had such skill that he confidently marked copy in ink, a revision of any kind never being necessary. This compliment was doubly strong because it was certain to reach him secondhand, thereby assuring him of its sincerity.

A compliment differs from flattery in that it is objective and given without thought of gain. Flattery is often merely lip service, or excessive praise given for motives other than expressed.

The greatest efforts of the human race have always resulted from the love of praise. This should be inspired in childhood, but too often parents actually lose the confidence of their children by pointing out only defects and mistakes. The wise parent makes it a point to compliment a child when he deserves it. A woman I know has a 12-year-old son who considers washing dishes for his mother a

great honour. It came about by way of a compliment. One night, he had been unwillingly washing a large dish when it slipped and crashed to the floor. Silence. Then his mother said, "You know, Robert, of all the times you have washed the dishes for me, this is the first time you dropped one. I think you have set some kind of a record." Anxiety left the face of the boy and he smiled. As one psychologist advises, "Praise virtue, and you will find few vices to criticise."

There is art in this giving of compliments. Thus, the good compliment is always to the point. Timing, too, is important. Don't wait too long to tell a person what a good talk he gave, or how well he cut your grass, cooked your dinner, or typed your letter. But don't do it immediately, when he is expecting it, either. Wait. Then when he thinks you may have forgotten, pass the praise.

Confidence, it has been said, is the greatest gift that one human can give to another. But that does not mean we should be wasteful with our compliments. Rather, we should count them carefully, remembering that a good compliment has greater purchasing power than money, that no one is too busy or successful to receive a word of praise.

III Write an essay in about 300 words on any one of the topics:

- (a) Violence can solve no problems
- (b) Youth power
- (c) The role of the banks in fighting poverty

IV SPOTTING ERRORS

1. She told me that she will get the work done whether the carpenter came or not. No error
2. Take the example of England where most universities not infrequently run common courses for B.A. and M.A. classes. No error
3. On being told about the tragic happening he lost no time in condoling the death of his director. No error
4. He would have most certainly preferred to write the examination in a language he knew best, isn't it?
5. By the time she finishes writing the last letter I will have travelled ten.

6. Doing not the work by or before the prescribed time can often invite censure. **No error**
7. One of the conditions laid down are related to the extra expenditure he keeps talking about. **No error**
8. It was not he alone who was carried away by the false story and who dubbed the lawyer as a liar. **No error**
9. At college I had many choices but I did not hesitate to offer Mathematics and Music. **No error**
10. Giving the examination at such a short notice will at best get me a third. **No error**

SYNONYMS

V Select the word which is closest in meaning to the given word:

- Indecisive**
(a) weak
(b) diluted
(c) unsettled
(d) doubtful
- Quaver**
(a) tremble
(b) talk loudly
(c) imagine
(d) fear
- Exculpate**
(a) pardon
(b) banish
(c) clear
(d) blame
- Outlandish**
(a) enormous
(b) strange
(c) suburban
(d) refined
- Reincind**
(a) cancel
(b) recall
(c) reiterate
(d) reform

ANTONYMS

VI Choose the word which is opposite in meaning to the given word:

- Overpower**
(a) lose
(b) surrender

- Specious**
(a) implausible
(b) unworthy
(c) narrow
(d) unclear
- Discreet**
(a) foolish
(b) inattentive
(c) tactless
(d) separate
- Indignant**
(a) joyful
(b) bright
(c) healthy
(d) calm
- Contemplative**
(a) unwise
(b) thoughtless
(c) active
(d) practical

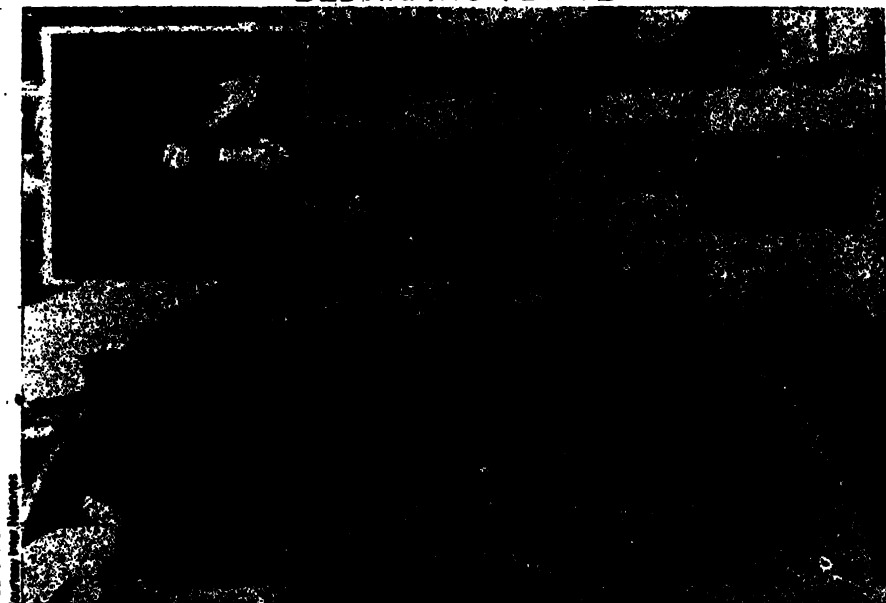
SENTENCE COMPLETION

VII Write down the letter of every item that could fill the gap in each question:

- They enjoy looking——their children playing in the park.
(a) to (b) about
(c) at (d) on
- She may not come, but we'll get ready in case she——.
(a) will (b) does

- You father ought not to——me your secret, but he did.
(a) tell (b) having told
(c) be telling (d) have told
- I——to go to the college swimming pool every Sunday.
(a) am used (b) used
(c) was used (d) use
- I wish I——the answer to your question.
(a) knew (b) would know
(c) will (d) know
- The bulb broke and immediately all the lights went——.
(a) back (b) off
(c) in (d) down
- As her grandfather——for many years, the visitor felt intrigued.
(a) had died (b) had been dying
(c) had been dead (d) was dying
- He was——prepared to do it in his heart of hearts.
(a) definitely (b) a little
(c) little (d) a little bit
- Beyond the bridge was a small cottage——would give them shelter for the night.
(a) in which (b) where
(c) who (d) that
- She had tried every remedy——standing on her head.
(a) except (b) beyond
(c) yet (d) only

DESTINATION DRIVE



In this age of high technology, anything is possible, what with innovativeness knowing no bounds of human ingenuity. A fully automatic driver-orientation device, developed by the Munich-based Siemens Electrical Corporation, will enable drivers to find their way around in totally unfamiliar surroundings. A code number taken from a map of the city in question, indicating the driver's current location and the direction he wishes to travel in, is logged in, and presto, the device sets to work, with directional arrows lighting up on the dashboard. And as if this is not enough, a digital display indicates how close he is to his destination!

PRACTICAL SESSIONS : Sessions are conducted in Calcutta, New Delhi, Bombay, Madras, Bangalore and Bhubaneswar (Orissa)

PERSONAL CONTACT PROGRAMME : Contact workshops will be held at different places before practical sessions.

TEXT BOOKS : Students are supplied Free of cost standard text books of well known authors on important subjects.

JOURNAL : To keep every student abreast of the recent developments in computer science, IIMS supplies its quarterly journal **MODERN MANAGEMENT AND COMPUTER AGE**

SCHOLARSHIP : A merit scholarship of Rs. 1000/- will be awarded to the highest scorer in the Final Examination.

PLACEMENT : The Institute's Placement Service assists students in securing suitable jobs.

CONCESSION : 20% concession will be allowed on tuition fees to those who belong to SC/ST, or are Defence Personnel or Physically Handicapped.

EXAMINATION CENTRES : Ahmedabad, Allahabad, Amritsar, Bombay, Bangalore, Calcutta, Cochin, Delhi, Gauhati, Hyderabad, Jaipur, Sringeri, Kanpur, Lucknow, Madras, Patna, Ranchi, Bokaro, Bhubaneswar, Bahrain, Dubai (UAE), Jeddah (Saudi Arabia), Kuwait, Kathmandu (Nepal), Tiruvandrum.

DIRECTOR OF STUDIES
PROF. MRITYUNJOY BANERJEE Former Education Minister of West Bengal & Former Head of the Department of Business Administration,
Burdwan University

CHAIRMAN (Examinations Committee) Asst. Director of Research The Institute of Cost and Works Accountants of India.
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PROF. V. NATARAJAN

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**STUDY CENTRE : BG-175 Salt Lake, Sector-1,
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FOREIGN CANDIDATES : Candidates from abroad will be required to remit Rs. 50/- for prospectus and applications forms.

LAST DATE : Last date for supply of prescribed application forms and prospectus and receipt thereof duly filled in is

30th July 1985

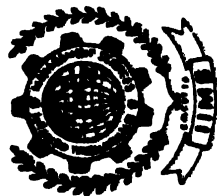
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IIMS



POST-GRADUATE DIPLOMA IN COMPUTER APPLICATIONS 1985-86

Applications in prescribed forms are invited for the ONE-YEAR Post-Graduate Correspondence programme in COMPUTER APPLICATIONS with practical work on the computer.

THE INSTITUTE : IIMS was established in 1978 as an autonomous body. Registered by the Govt. as a non-profit institution, devoted to the art and science of management and the encouragement of good practice and high standards of professional management. The Institute is associated with Calcutta Productivity Council, Business Management Association, U. K., Indian Society for Training & Development, New Delhi, Institute of Marketing Management, New Delhi and accredited as Regional Centre in Calcutta of the Association of Indian Universities, New Delhi for organising training programmes. Along with various other activities, IIMS conducts Post-Graduate programmes in Business Administration (MBA), Personnel Management & Industrial Relations, Marketing Management, Office Management by correspondence & publishes a quarterly journal 'Modern Management' and also books on Management.

OBJECTIVES OF THE PROGRAMME : In the recent past abundant job opportunities have presented themselves in activities related to computers. The situation today in India is one of the very serious manpower shortage in this field. Even as early as 1978, a committee of the Department of Electronics estimated that the total manpower requirements in computer-related activities for the following decade would be approximately 5000 new jobs annually, the gap between demand and supply being in the range of 10:1. The steps taken by the Government and other institutions are much inadequate; only a small fraction of vacancies in the field of computers is being filled at present. This is mainly attributed to the inadequacy of trained manpower.

Even in an advanced country like the United States, there is a significant manpower shortage in this field. It has been estimated that the gap there is as much as 3:1. That is why there is taking place so much brain drain to U.S.A. from India and other developing countries in computer-related areas. Thus computer education is still in its infancy in India. Hence, to cater to this growing demand IIMS has started a post-graduate correspondence course in Computer Applications with practical work (on-hand exercises) on the computer.

THE PROGRAMME : The Course is divided in two semesters. Theoretical lessons in each paper would be followed up by PRACTICAL ON-HAND EXERCISES IN COMPUTER for teaching/debugging of programmes.

COURSE OUTLINE :

1st SEMESTER

- Paper I. Introduction to Programming and BASIC Language
II. Introduction to Computer Organisation
III. Computer-Oriented Numerical and Statistical Methods
IV. FORTRAN and-PASCAL Language

2nd SEMESTER

- Paper V. COBOL/DBMS and Business Data Processing
VI. Data and File Structure
VII. System Analysis and Design
VIII. Project work

Our own Printed study materials on each paper will be supplied with standard text books as recommended by the Dept. of Electronic Govt. of India.

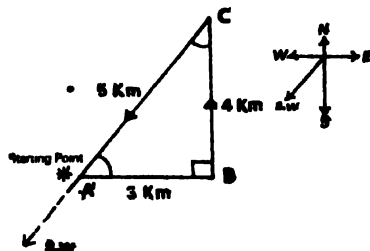
Course Co-ordinator : S. K. Paul (B.Tech.) : MBIM(LAQ)

ANSWERS

Test Of Reasoning

- 1 (e) Here two sentences contain the word red viz.
 - Apples are red Sun pie ket
 - Apples are good Ket ditch pie
 In these two sentences we see that Apples are all common on left hand side and Pie Kit are common on right hand side This means Apples and 'are' are denoted by Pie and Ket So in the sentence , Apples are red Sun pie ket red would be denoted by sun
- 2 (e) We have seen above that we can find the word meaning red without using Ten per cie and Ditch pie ket sun Hence they are superfluous
- 3 (d) CALCUTTA is written as XZOXFGGZ
 On a closer look we can see that in the coded word each alphabet has been replaced by an alphabet of the same position in the reverse order of the alphabetic series e.g. A is replaced by Z (i.e. first alphabet by the last) C is replaced by X (i.e. third alphabet from the beginning is replaced by third alphabet from the end) Following the same rule BOMBAY would be written as YLNYZB
- 4 (e) Series is of the form
 aabbaa aabbaa aabbaa
- 5 (b) As per the given signs
 A > B means A = B (I)
 B = C means B > C (II)
 C + A means C < A (III)
 Alternative (a) is C > A which means C ≠ A actually This is not correct as we see from (III)
 Alternative (b) is C < A which actually means C = A which is correct as we see from (III) C < A
 Alternative (c) is C = A which means C > A which is opposite to (III) and hence is wrong
 Alternative (d) is A + B > 2C which means A + B = 2C
 We know A > C from (I)
 and A = B from (II)
 Adding A on both sides of the first equation
 A + A > C + A
 A + B > A + C
 Hence A + B > 2C is also wrong
 Thus only the alternative (b) is correct

6 (d)



After going 3 km towards east Ram turns left (at an angle of 90°) i.e. he starts moving towards north After travelling for 4 km he turns in the south-west direction and travels 5 km

Thus the route traversed by him forms a right angle triangle ABC because in a right angle triangle

$$(AB)^2 + (BC)^2 = (AC)^2$$

$$(3)^2 + (4)^2$$

$$= 9 + 16 = 25 = (5)^2$$

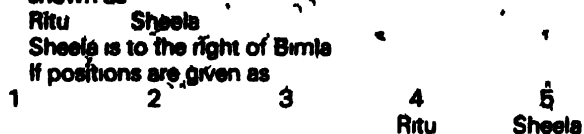
$$= 9 + 16$$

Thus AC is the third arm or diagonal of the triangle and so we can conclude that Ram is back at the starting point

- 7 (a) AMJLTHAA TAJMAHAL name of a monument

- 9 (a) NYAMAARA : TROCHYLA name of a book
 Other two words are
 IRSAUTATA AUSTRALIA
 YTOOK TOKYO

- 10 (e) Ritu is to the left of Sheela and is next to her This can be shown as



Bimla can be either at position 1, 2, or 3 Geeta and Beena are to the left of Bimla So Bimla can only be at position 3



Thus Bimla is at the centre

And in order to determine the position of all the five girls consider the following explanation

Geeta is to Bimla's left She could be either at position 1 or 2

But Beena is to the right of Geeta So Geeta can only be at position 1 and hence Beena is at position 2 So the position of the girls is



- 11 (c) Q's brother's wife is Q's sister-in-law Her father-in-law must be her husband's father i.e. Q's brother's father and hence Q's father

- 12 (e) GANGA is written as DJNDJ

In the word DJNDJ if we substitute each letter except the middle one (N) with a letter three places to its left in the alphabetic series e.g. D is replaced by A J is replaced by G we get AGNAG which is GANGA written in the reverse order So now WATCH would be coded in two steps i.e.

i) Write WATCH in the reverse order i.e. HCTAW

ii) Substitute each alphabet (except the middle one) with the third letter to its right in the alphabetic series i.e. H should be replaced by K C by F and so on to give KFTDZ

- 13 (c) Word LONDON can be broken into parts as

$$\frac{LO}{3} \quad \frac{ND}{2} \quad \frac{ON}{1}$$

These parts can be rewritten as

$$\frac{ON}{3} \quad \frac{ND}{2} \quad \frac{LO}{1}$$

Now if each alphabet is replaced by the third letter to its left in the alphabetic series i.e. O is replaced by L N by K and so on we get LKKAIL

So now if PERIOD is to be coded it should first be divided into three parts viz

$$\frac{PE}{1} \quad \frac{RI}{2} \quad \frac{OD}{3}$$

which should then be rewritten as

$$\frac{OD}{3} \quad \frac{RI}{2} \quad \frac{PE}{1}$$

Each letter should now be replaced by the third alphabet to its left in the alphabetic series i.e. O should be replaced by L, D by A and so on to give LAOFMB

- 14 (c) Here we define five positions, viz. 1, 2, 3, 4 and 5 in the descending order of age, i.e. person at position 1 is older than the person at position 2, Person at position 2 is older than the person at position 3 and so on
 1 > 2 > 3 > 4 > 5

From statement (i) Jack is elder to John. We don't know

the position of Jack so we assume that he can have any of the positions 1, 2, 3 or 4. He can't be at 5 since he will become the youngest at that position, which is not true since he is elder to at least one person, i.e., John. Similarly James can have any of the positions 2, 3, 4 or 5. But he can't be at position 1, since he would become eldest then, which is not true as he is younger to at least one person, i.e., Jack. So now the possible positions are

1 >	2 >	3 >	4 >	5
Jack	Jack	Jack	Jack	X
X	John	John	John	John

Now we consider a statement which is related to either Jack or John. One such statement is statement (ii) i.e., James is older to Jack.

From the same argument as above James can be at positions 1, 2 or 3 only.

1 >	2 >	3 >	4 >	5
James	James	James	X	X
X	Jack	Jack	Jack	X
X	X	John	John	John

Now we should consider a statement involving John. One such statement is statement (iv) which involves John, i.e., Brown is younger to John

So now the possible positions would be

1 >	2 >	3 >	4 >	5
James	James	X	X	X
X	Jack	Jack	X	X
X	X	John	John	X
X	X	X	Brown	Brown

Now we take a statement relating to Brown, i.e.,

Brown is elder to Tony.

which means Tony can only be at position 5. So the final order is

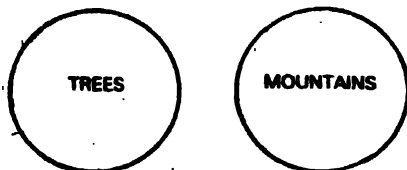
1 >	2 >	3 >	4 >	5
James	X	X	X	X
X	Jack	X	X	X
X	X	John	X	X
X	X	X	Brown	X
X	X	X	X	Tony

Hence Tony is the youngest.

15. (e) The series is

srq qrs srq qrs srq qrs

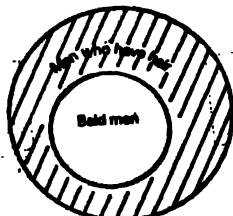
16. (e) This problem can be solved using Ven diagrams. Let one circle represent the set of mountains and another circle represent the set of trees.



As is evident from the figure, there is nothing common between the set of trees and the set of mountains. So there is no possibility of some or most mountains being trees.

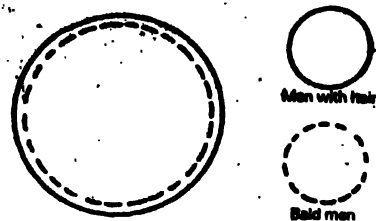
17. (d) Again representing the statement by figures we see that there are two possibilities.

(a)



All bald men have hair and there are others also who have hair i.e. the set of bald men is a subset of those who have hair.

(b)



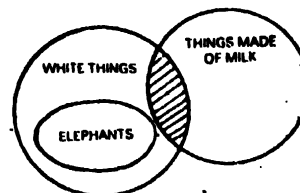
The set of bald men and the set of those who have hair is exactly the same.

We see that in case (a) statement II is correct, i.e. all men with hair are not necessarily bald.

In case (b) we see that the statement I is correct. But at a given time either of the two cases is possible, so only either of the two conclusions can be possibly drawn.

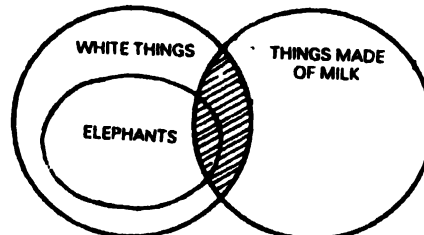
18. (e) There are three cases possible in which the two statements can coexist simultaneously.

(a)



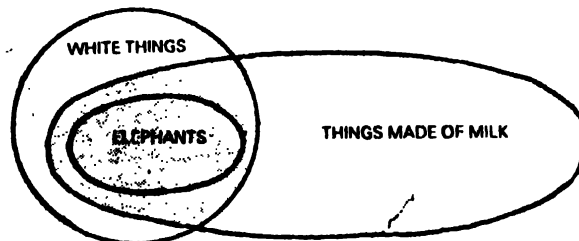
This diagram depicts that all elephants are white (things); some white things (which are not elephants) are made of milk.

(b)



Here the diagram depicts that all elephants are white and some white things (including some elephants) are made of milk.

(c)

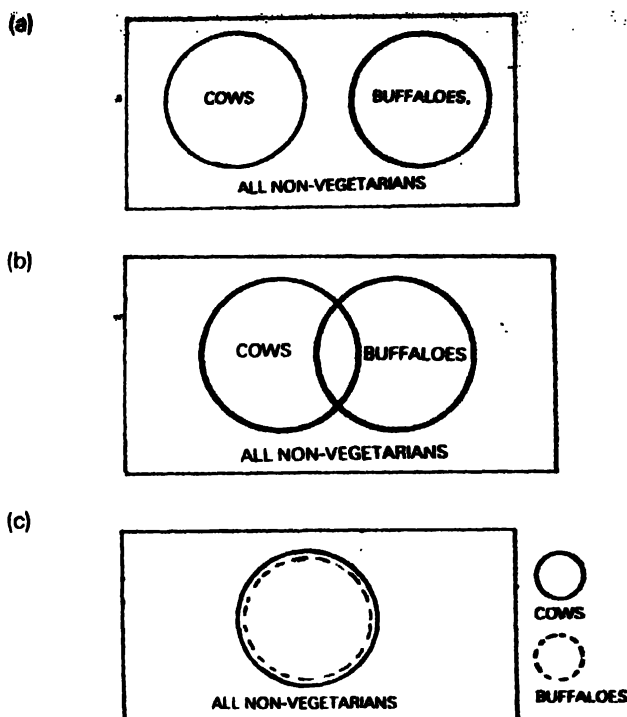


The third case is that all elephants are white things and some white things (including all elephants) are made of milk.

Thus we see that the given conclusion:

'All elephants are necessarily made of milk.' can be drawn only in one case. Thus such a generalised statement is definitely false.

19. (e) Here again there are three distinct possibilities viz:



In all the three cases though we see that all cows are non-vegetarians and all buffaloes are non-vegetarians we find that only in the case (c) it is so that all cows are all buffaloes. Thus we cannot always draw this conclusion, hence this conclusion is definitely false.

20. (a) If all boats fly in the air, it is evident that some boats fly in air. It is given that some aeroplanes fly in the air. So the statement that some boats as well as some aeroplanes fly in the air is definitely true.
21. (a) The given statement talks about responsibility to Parliament so it is implicit in the statement that India has a Parliament and so is a parliamentary democracy. But the statement talks nothing about the term of the Prime Minister directly or indirectly so the assumption about the term of Prime Minister is not implicit in the statement.
22. (e) There is nothing in the statement on the basis of which any of the two assumptions can be possibly made. The statement talks about the Nobel Prize but no where does it lead us to assume that they are given in the memory of Sir Alfred Nobel. Similarly there is nothing to assume that C.V. Raman was the first person to get the Nobel Prize in Physics. It only states that C.V. Raman was given the Nobel Prize in Physics. Whether he was the first recipient or the last, nobody can tell from the statement.
23. (a) Purpose of a school whether public or private is to impart education. So their existence or abolition should be based most on this factor. Thus an argument which speaks about shortage of schools in basically strong as it relates to the provision of education. The second argument relates to a factor not related directly with education or schools. Public schools might be creating snobs, but still they may be lending a helpful hand in the field of education. So their abolition on this basis is not justified. Since the argument does not relate to the basic issue it is a weak argument.
24. (b) The commercialisation of television is related directly to the line of control. In commercial television, the line of control passes into private hands as they spend large

chunks of money on TV programmes. But the first argument does not relate to this aspect. It only gives a vague reason, which is not substantial. The second argument directly relates to the control aspect and hence is a strong argument.

25. (a) Before going into the decision about the colour of uniforms one should know the various reasons for choosing a colour. One of the important reasons is visibility. So the first argument relating to visibility is strong (though it may be incorrect). But the second argument is weak as it does not relate to any reasons regarding the colour choice.

BSRB (PO) Exam, Aug '84

1. (a) 2. (b)
 3. (d) The annual Best Actor Award is being given since 1970 by the Government of India. It carries a Rajat Kamal and a cash prize of Rs 10,000.
 4. (b) The Jnanpith Award is given by a Calcutta-based private organisation of the same name since 1965, for the best literary work in any one of the Indian languages. Originally, the prize money was Rs 1,00,000, but since 1982 it has been raised to Rs 1,50,000.
 5. (d) 6. (d) 7. (b) 8. (a) 9. (c)
 10. (a) Indian Mountaineering Institute celebrated its Silver Jubilee in August 1983.
 11. (c) 12. (c) 13. (d) 14. (c) 15. (a) 16. (b)
 17. (b) 18. (b) 19. (c) 20. (b) 21. (e) 22. (c)
 23. (c) 24. (e) 25. (a)
 26. (c) All others are planets while moon is a satellite of earth.
 27. (e) 28. (a) 29. (d) 30. (b) 31. (c) 32. (a)
 33. (d) 34. (d) 35. (a) 36. (a) 37. (a) 38. (e)
 39. (a) 40. (a) 41. (a) 42. (b) 43. (b) 44. (d)
 45. (a) 46. (a) 47. (a) 48. (a) 49. (e) 50. (b)

SBI (PO) Exam, Oct '84

1. (a) Merdeka is an international football tournament played every year in Kuala Lumpur (Malaysia)
 2. (a) 3. (a) 4. (a) 5. (a) 6. (a) 7. (b)
 8. (a) 9. (b)
 10. (d) Aid India Club is an organisation of about 13 member-countries. It provides financial help to India every year since 1958, in the form of foreign exchange. The help is extended on the basis of previous years' economic achievement.
 11. (a) Magsaysay Award is an international award given by the Government of Philippines, since 1958, in memory of their late President, Ramon Magsaysay, who died in an air crash, in July 1957. It is given in five different fields—government service, public service, community leadership, journalism literature and international understanding. It carries a cash prize of \$20,000 which is announced in July-August every year and handed over to the winners on Aug 31, every year—the birth anniversary of Ramon Magsaysay.
 12. (a & b) The Pulitzer Prize is given for best work in literature, music, science and journalism. The award is distributed by an American organisation and was established in the memory of Joseph Pulitzer (1847-1911), a US journalist and publisher, in 1917.
 13. (a) 14. (a)
 15. (a & d) Mars has two satellites, Jupiter has 12 satellites and Neptune has two satellites.
 16. (b) 17. (a) 18. (e) 19. (b) 20. (b) 21. (a)
 22. (a) 23. (a) 24. (a) 25. (b) 26. (a) 27. (b)

31. (a) The National Development Council comprises the PM, CMs/Lt Governors. It approves and reviews various Five-Year Plans.

32. (b) 33. (a) 34. (c) 35. (d)

36. (b) The term North-South Dialogue denotes dialogues between the rich nations and poor nations. All the rich countries of the world barring New Zealand and Australia are situated north of the Equator. Hence they are known as North and the poor countries are called South.

37. (b) 38. (d) 39. (a) 40. (b) 41. (d)

42. (c) The Concorde is a British-French supersonic passenger airliner. It is the fastest passenger airliner in the world.

43. (c) 44. (b)

45. (e) The Finance Commission is appointed by the President of India under Art 280 of the Constitution. The Commission recommends the distribution of income-tax between the states and the Union government.

46. (a)

47. (d) The correct pairs are

(a) Ravi Shankar-Sitar

(b) Hari Prasad Chaurasia-Flute

(c) Bismillah Khan-Shehnai

(d) Vilayat Khan-Sitar

(e) Ustad Amjad Ali Khan-Sarod

English

1. (b) 2. (a) 3. (c) 4. (b) 5. (d)

II A sincere compliment—the same as real praise—though most useful socially, is very wrongly used. When properly exchanged it does good to both the giver and the receiver. For, everyone craves for praise and if one receives it from a professional colleague it is truly precious.

A compliment is not the same as flattery. The latter is motivated praise given for the sake of some selfish gain.

Human achievement has been inspired by the love of praise. Wise parents should therefore praise their children liberally whenever the latter deserve it.

Complimenting is an art. A good compliment should be both to the point and timely, neither too late nor too soon. Similarly, like money compliments too should be 'spent' economically, for they are a precious currency.

Before their nationalisation in 1969, the banks were in the hands of large industrial houses catering by and large to their own and other wealthy sections' needs. The socialist and democratic ideology of the state requires them to contribute to the well-being of the ordinary people and to the overall prosperity of the nation. This purpose has been greatly achieved by the nationalisation of the banks. Today it is not an uncommon sight to see a disabled person driving an autorickshaw on which is written 'hypothecated to the Punjab National Bank' (or to any other nationalised bank). Now it is possible for unemployed hands including jobless doctors and engineers to apply for and get loans from the banks and to start their own business or trade.

These useful activities of the banks are not confined to the urban areas only. Real benefits have come to the weaker sections in the countryside. Banks have opened thousands of new branches in the remotest villages and have made it possible for the poorest of the poor to get loans on very easy terms, sometimes even without any security, for a wide variety of activities including buying livestock, digging new wells, building bio-gas plants and purchasing fertilisers, tractors and other farm equipment. Sometimes whole villages have been adopted by the banks and the overall responsibility of their planned development is being undertaken by them.

It is thus obvious that the nationalised banks have been playing a critical role in our developmental activities, more particularly in the areas of rural financing and unemployment eradication programmes. In a country where more than 45% of the population lives below the poverty line, such beneficial activities acquire an uncommon importance. For these to continue it is vital that people develop the habit of saving money and depositing it in the banks and that those who seek loans and other benefits from the banks make timely repayments, ensuring not only the continuance of the already existing programmes of the banks but also their enhancement. Banks will then become one of the major instruments for the removal of poverty in our country.

- | | | | | | |
|-----|--------|--------|--------|--------|---------|
| IV | 1. (b) | 2. (e) | 3. (d) | 4. (d) | 5. (e) |
| | 6. (a) | 7. (b) | 8. (d) | 9. (d) | 10. (a) |
| V | 1. (c) | 2. (a) | 3. (c) | 4. (b) | 5. (a) |
| VI | 1. (b) | 2. (a) | 3. (c) | 4. (d) | 5. (b) |
| VII | 1. (c) | 2. (b) | 3. (d) | 4. (b) | 5. (a) |
| | 6. (b) | 7. (c) | 8. (a) | 9. (d) | 10. (a) |

THE LORDS' SHOW

The first public television broadcast of the work of a parliamentary institution unique in the world was transmitted in Britain on Jan 23, 1985.

The House of Lords, which can trace its beginnings back to the 11th century in Councils summoned by English Kings, is the "second chamber" in the country's parliamentary system. Its members, unlike those of the House of Commons, are not elected. It depends overwhelmingly on the hereditary principle.

As a set for a television "series", the chamber of the Lords could hardly be bettered. At one end is the gilded throne where the Queen sits at the annual opening of Parliament. In front of the throne is the woolpack, which represents the wealth of the nation from the days when the country's economy depended on wool trade. This is where Lord Chancellor presides. *Seating of members*

To his right is the Spiritual side of the House, where the Bishops sit. Alongside them the government ministers sit on their front bench

and to the Lord Chancellor's left is the Temporal side where the opposition parties sit. Beyond the three clerks in their wigs and gowns at the table there are the cross-benches which are used by peers who do not ally themselves to any political party.

So venerable are the precincts of this place, and so fond of its traditions are its members, that the Lords sometimes tend to be thought of by the public as a somewhat staid group of parliamentarians out of touch with the 20th century. That is an unfair judgment.

Members of the Upper House work long hours on about 145 days of each year. They comb through highly complex, sometimes deeply tedious legislation that has been sent to them from the Commons. It is their function to check endlessly on the work the Commons has done, and they sometimes propose new legislation and debates of their own. If the Lords believe that the Commons has gone wrong constitutionally they will reverse a decision. More frequently, they see their duty,

because they are a non-elected House, as revising, amending and warning.

Momentous decision

The Lord's decision to allow cameras into their workplace for an experimental six-month period was described by some observers as momentous. Lord Home, a former PM, said the issues involved were "near constitutional". The point at issue was whether the Lords should move ahead of what is known in parliamentary language as "the other place"—the House of Commons....

If the Lords all appeared together they would cram their chamber to overflowing. There are 1,182 members; of these, 26 are Bishops of the Church of England; 793 are hereditary peers; 19 are Law Lords and 344 are life peers. Members never do all turn up together. The average daily attendance, though, is a respectable 320. They receive no salary.

It would be fascinating to learn whether the telecast was as interesting as *Yes Minister*.

Quantitative Aptitude

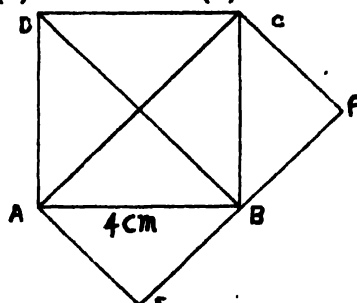
BY KAVITA KAPOOR & B. L. ARORA

FOR BSRB (PO), NDA, CDSE...

These questions should prove extremely beneficial for those preparing for the SCRA, CDSE, Assistant's Grade and CAT for IIMs. Specially designed to test your aptitude for quantities!

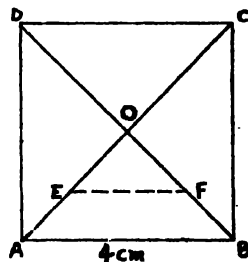
DIRECTIONS : Tick mark the correct alternative from among the several alternatives given below each question. The correct answers and explanations appear at the end of this test.

- The value of $\frac{1}{2} + \frac{1}{3}$ is equal to nearly
(a) 0.12 (b) $\frac{5}{6}$
(c) 0.19 (d) 0.21
- The value of 99^a is equal to
(a) 9801 (b) 9811
(c) 9781 (d) 9981
- The area of the rectangle AEFC in the figure below is
(a) 10 cm^2 (b) 12 cm^2
(c) 16 cm^2 (d) 24 cm^2

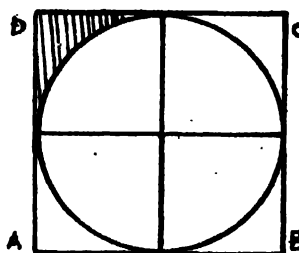


- The sum of the radii of two circles is 12 cm and the difference of their areas is $80\pi \text{ cm}^2$. The difference in their circumferences will be nearly
(a) 13.33 cm (b) 8.33 cm
(c) 6.33 cm (d) 4.25 cm
- In the fractions $\frac{1}{4}, \frac{1}{8}, \frac{3}{8}, \frac{1}{2}$ the least is
(a) $\frac{1}{4}$ (b) $\frac{1}{8}$
(c) $\frac{3}{8}$ (d) $\frac{1}{2}$
- The number $10^{27} - 1$ is not divisible by
(a) 11 (b) 9
(c) 3 (d) 27
- $0.035 \times 0.035 \times 0.035$
 $0.035 \times 0.035 + 0.0045$
 $+ 0.0045 \times 0.0045 \times 0.0045$
 $\times 0.0045 - 3.5 \times 4.5 \times 10^{-7}$
is equal to
(a) 0.0080 (b) 0.0395
(c) 0.0010 (d) -0.010
- If the length of a rectangle is increased by 10% and its width is decreased by 10%, its area will
(a) Remain unchanged

- (b) Increase by 20%
(c) Decrease by 1%
(d) Increase by 5%
- In a group of 30 people, 10 take tea but not coffee and 14 take coffee but not tea. How many of them take tea and how many take coffee?
(a) 16, 14 (b) 16, 20
(c) 10, 20 (d) 12, 18
- ABCD is a square and E, F are the midpoints of the half diagonals AO and BO. The area of the triangle OEF is
(a) 2 cm^2 (b) $\sqrt{2} \text{ cm}^2$
(c) 1 cm^2 (d) $\frac{1}{\sqrt{2} \text{ cm}^2}$



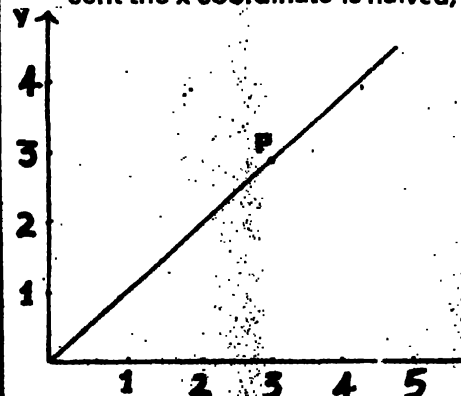
- ABCD is a square. If the shaded area is $A \text{ cm}^2$, the side of the square is
(a) $\sqrt{\frac{4A}{1-\pi}}$ (b) $\sqrt{4(4-\pi)A}$
(c) $\sqrt{16(4-\pi)A}$ (d) $\sqrt{\frac{16A}{4-\pi}}$



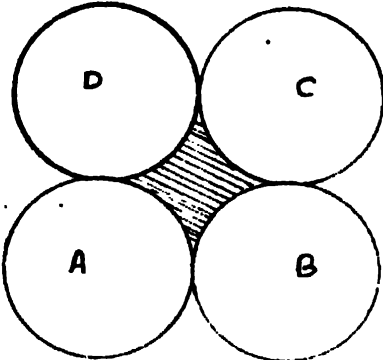
- If $6x + 3 < 2x + 4$, x cannot be
(a) $\frac{1}{4}$ (b) $\frac{3}{4}$
(c) $\frac{1}{2}$ (d) zero
- If $3^x \cdot 27^{x-2} = 1$, $x, y > 0$, and

are both integers, the number of possible values of x is

- (a) 1 (b) 2
(c) 3 (d) infinite
- A 15 kg mixture of cement and sand in the ratio 2:5 is mixed with 10 kg of another mixture of cement and sand in the ratio 2:3. The mixture will contain cement and sand in the ratio
(a) 2:4 (b) 31:73
(c) 58:117 (d) 4:21
- The value of the expression 989^a is equal to
(a) 978121 (b) 987121
(c) 988121 (d) 978201
- Indira Gandhi was assassinated on Oct 31, 1984, which was Wednesday. Her birth-date, Nov 19, 1917 fell on
(a) Monday
(b) Tuesday
(c) Wednesday
(d) Thursday
- Two pipes can fill a tank in 3 and 4 hours respectively while a third can empty it in 5 hours. If all the pipes work simultaneously, an empty tank will be filled in nearly
(a) 2 hours
(b) 2.6 hours
(c) 2.88 hours
(d) 3.2 hours
- If $x + \frac{1}{x} = 5$ and $x^2 + \frac{1}{x^2} = 12$, the value of $x^3 + \frac{1}{x^3}$ will be
(a) 55 (b) 58
(c) 62 (d) 52
- Expressed as a percentage 0.003 is equal to
(a) 0.00003% (b) 0.03%
(c) 0.3% (d) 3%
- If $a \cdot b = (a-b)$, the value of $(-5) \cdot 3$ is
(a) 8 (b) -8
(c) -15 (d) 2
- If the scale chosen to represent the x coordinate is halved,



22. If x is 25% more than y , y is _____ less than x .
- (a) 25% (b) 22.5%
(c) 20% (d) 17.5%
23. If $x^2 + \frac{1}{x^2} = 20$ and $x + \frac{1}{x} = 5$, $x^2 + \frac{1}{x^2}$ will be
- (a) 95 (b) 101
(c) 105 (d) 129
24. A man can do a piece of work in 12 days; his wife and son can do it in 9 days, while he and his wife can do it in 8 days. The man and his son will be able to finish it in
- (a) 10 days
(b) $7\frac{1}{2}$ days
(c) $7\frac{1}{3}$ days
(d) 7 days
25. $12^n - 1$ is divisible by 11 if n is
- (a) Any integer
(b) Any odd integer
(c) Any even integer
(d) It is not divisible for all values of n .
26. The number $4n^2 + 4n$ is always divisible by
- (a) 8
(b) 12
(c) 16
(d) None of the above
(e) All of the above
27. Ten men can do a job in 4 hours while 12 women can do it in 6 hours. Sixteen men and 8 women will finish the job in nearly
- (a) 1.5 hours
(b) 1.75 hours
(c) 1.88 hours

28. The sum of the base and height of a triangle is 15 cm. If the area of the triangle is 25 cm^2 , the base is
- (a) 6 cm (b) 9 cm
(c) 10 cm (d) 11.5 cm
29. Rakesh can do a piece of work in 7 days and Naresh can do it in 5 days. Rakesh works for 3 days and leaves. Naresh will finish the remaining work in
- (a) 2.5 days (b) $3\frac{1}{4}$ days
(c) $2\frac{1}{2}$ days (d) 2.86 days
30. Each of the four circles shown in the figure is of the same radius R . The area of the shaded portion is nearly
- (a) $\frac{1}{4}R^2$ (b) $\frac{1}{2}R^2$
(c) $\frac{1}{4}R^2$ (d) $\frac{1}{2}R^2$
- 
31. If $f(a,b) = a^3 + b^3$, $f(2, f(3,4)) =$
- (a) 29 (b) 129
(c) 81 (d) 629
32. $(1 + \frac{1}{2}) (1 + \frac{1}{3}) (1 + \frac{1}{4}) \dots (1 + \frac{1}{n})$ is equal to nearly
- (a) $\frac{1}{2}$ (b) $\frac{1}{3}$
(c) 2 (d) 38
33. $[(\sqrt{6} + \sqrt{3})(\sqrt{6} - \sqrt{3})]^{3/2}$ is nearly equal to
- (a) $3\sqrt{3}$ (b) $2\sqrt{3}$
(c) $3\sqrt{18}$ (d) $3\sqrt{12}$

34. The value of the expression $x^2 - 12x + 32$ is negative for
- (a) $x < 4$ (b) $4 < x < 8$
(c) $x > 8$ (d) $0 < x < 4$
35. A number when divided by 81 leaves 27 as remainder. When it is divided by 27, the remainder will be
- (a) zero
(b) 9
(c) 18
(d) Can be any number < 27
36. The value of the expression 0.00168×0.00048 is equal to
- (a) 0.00048 (b) 0.0048
(c) 0.0000048 (d) 0.000048
37. The value of the expression $7 + 5 - (3 \div 2 \times \frac{1}{2})$ of $\frac{1}{2} + \frac{1}{2} \times \frac{1}{2}$ is equal to
- (a) $12\frac{1}{2}$ (b) $24\frac{1}{2}$
(c) $12\frac{1}{4}$ (d) $12\frac{1}{8}$
38. The cost of a pant is 70% of the cost of a coat and 130% of the cost of a shirt. If all the three cost Rs 623.60 the cost of the shirt will be nearly
- (a) Rs 135 (b) Rs 147.50
(c) Rs 150 (d) Rs 162.50
39. The maximum value of the expression $-x^2 + 6x + 12$ is
- (a) 12 (b) 21
(c) 17 (d) 8
40. The number $142596x4$ will be divisible by 22 if x is
- (a) 1 (b) 2
(c) 4 (d) 7
41. The maximum number of balls of 20 cm radius which can be accommodated in a cubical box of side 1 m is
- (a) 125 (b) 32
(c) 31 (d) 29
42. Which of the following fractions is the greatest?
- (a) $\frac{1}{2}$ (b) $\frac{1}{3}$
(c) $\frac{1}{4}$ (d) $\frac{1}{5}$

ANSWERS

1. (d) Each fraction is nearly equal to 0.1 and thus the sum should be close to 0.2.
2. (a) $99^2 - 1 = (99 + 1)(99 - 1) = 9800.99^2 = 9801$.
3. (c) The two sides of the rectangle are the diagonal of the square and its half diagonal. Thus, if L is the side of the square, the sides of the rectangle are $\sqrt{2}L$ and $L/\sqrt{2}$ and the area of the rectangle is L^2 . Since $L = 4$, the area is 16 cm^2 .
4. (a) If r_1 and r_2 are the radii of the circles, we have
 $r_1 + r_2 = 12$ and (i)
 $\pi(r_1^2 - r_2^2) = 80$ (ii)
 Dividing (ii) by (i) we get $\pi(r_1 - r_2) = \frac{80}{12} = \frac{20}{3}$ or $2\pi(r_1 - r_2) = \frac{40}{3} = 13.33 \text{ cm}$.
5. (a) The fractions are less than 1 by $3/17, 3/19,$

- $3/20$ and $3/25$ respectively. Since $3/17$ out of these is maximum, the first fraction $14/17$ is the least.
6. (a) The number $10^{27} - 1$ consists of 27 nines (9s) and is thus obviously divisible by 9 and 3. Once divided by 9, it will give twenty seven 1s (1111.....) and this number is divisible by 3. The original number is therefore divisible by 27. The number is obviously not divisible by 11.
7. (b) The expression can be written as $\frac{a^3 + b^3}{a^2 + b^2 - ab}$ with $a = 0.035$ and $b = 0.0045$ the expression is equal to $a + b = 0.0395$.
8. (c) If L and B are the original length and breadth respectively, the original area $= LB$ and the new area $= (1.1L) \cdot 0.9B = .99LB$.

9. (b) Since there are 30 people in all, the number of people who take both tea and coffee is obviously 6. Thus (10+6) take tea and (14+6) take coffee.
10. (c) Since $AC=4\sqrt{2}$, $AO=\frac{1}{2}AC=2\sqrt{2}$ and $EO=\frac{1}{2}AO=\sqrt{2}$.
Since the diagonals of a square intersect each other at right angles, area of $\triangle OEF$ is $\frac{1}{2}OE(OF)=\frac{1}{2}\sqrt{2}(\sqrt{2})=1\text{ cm}^2$.
11. (a) If L is the side of the square, the area of the shaded portion is $\frac{L^2}{4} - \pi \frac{L^2}{4} = A$ or $\frac{L^2}{4}(1-\pi)=A$
Thus, $L = \sqrt{4A/(1-\pi)}$.
12. (b) $6x+3 < 2x+4$ means $4x < 1$ or $x < \frac{1}{4}$. Since $\frac{1}{4}$ is greater than $\frac{1}{2}$, it is the correct answer.
13. (c) $3^y \cdot 27^{x-2} = 3^y \cdot 3^{3(x-2)} = 3^{y+3x-6} = 3^1 = 3^0$
Thus, $y+3x-6=0$ or $3x=6-y$
Therefore, $x=2-Y/3$
The number of possible values of x are, therefore, three, viz, 0, 1, 2.
14. (c) Amount of cement in the first mixture = $2 \times 15/7 \text{ kg} = 30/7 \text{ kg}$
Amount of cement in the second mixture = $\frac{1}{2} \times 10 \text{ kg} = 5 \text{ kg}$
Thus the amount of cement in 25 kg of final mixture is $\frac{30}{7} + 5 \text{ kg} = \frac{65}{7} \text{ kg}$
The amount of sand is $117/7 \text{ kg}$. The required ratio is therefore 58:117.
15. (a) $989^2 - 11^2 = (989+11)(989-11) = 978000$
 $\therefore 989^2 = 978121$
16. (a) In a non-leap year one day advances on the same date as we move in to the next year while in a leap year the days advance by two. Since there are 67 years between the two given days and 17 of these are leap years, $67+17 = 84$ days difference exists between the two dates.
Since $65 = 9 \times 7 + 2$, Nov 19, 1917 is 9 weeks and 2 days before Wednesday, viz, Monday.
17. (b) The part of the tank the three pipes fill in one hour is $\frac{1}{3} + \frac{1}{4} - \frac{1}{6} = \frac{5}{12}$. Thus the tank will be filled in $60/23 = 2.6$ hours.
18. (a) $x^3 + 1$
19. (c) $.003 = \frac{3}{1000} = \frac{0.3}{100} = 0.3\%$
20. (b) $(-5) \cdot 3 = -5 - 3 = -8$
21. (d) The height of P above the origin will remain the same whereas horizontal location will move towards left.
22. (c) $x = 1.25y$. $\therefore y = \frac{x}{1.25} = \frac{100}{1.25}\%$ of $x = 80\%x$.
23. (a) $x^2 + 1/x^2 = (x+1/x)(x^2+1/x^2-1)$
 $= 5x(20-1) = 95$.
24. (c) Wife's one day's work = $\frac{1}{3} - \frac{1}{12} = \frac{1}{4}$
 \therefore Son's one day's work = $\frac{1}{3} - \frac{1}{4} = \frac{1}{12}$
The man's and son's one day's work = $\frac{1}{4} + \frac{1}{12} = \frac{1}{3}$
They will thus finish it in $\frac{3}{1} = 3$ days.
25. (a) $12^n - 1 = (12-1)(12^{n-1} + 12^{n-2} + \dots + 12 + 1)$. Thus $11 = 12-1$ is a factor of $12^n - 1$ for all n .
26. (a) $4n^2 + 4n = 4n(n+1)$ is always divisible by 4,

- since $n(n+1)$ is always
27. (d) 1 man's 1 hour's job = $\frac{1}{16}$ and 1 woman's 1 hour's job = $\frac{1}{24}$.
 \therefore 16 men's and 8 women's 1 hour's job = $\frac{1}{16} + \frac{1}{24} = \frac{144+40}{360} = \frac{184}{360}$
Time required $\frac{360}{184}$ hrs = 1.95 hrs.
28. (c) $b + h = 15$..(1)
Area = $\frac{1}{2}bh = 25$ or $bh = 50$
 $b-h = [(b+h)^2 - 4bh]^{1/2}$
or $b-h = \sqrt{(225-200)} = 5$..(2)
Adding (1) and (2)
 $2b = 20$ or $b = 10 \text{ cm}$
29. (d) Work done by Rakesh in 3 days = $\frac{1}{3}$.
The remaining work ($\frac{2}{3}$) will be finished by Rakesh in $5 \times \frac{1}{3}$ days = $\frac{5}{3}$ days = 2.86 days.
30. (b) The required area = Area of the square ABCD of side $2R-4x$ the area of the quadrant of a circle
 $= 4R^2 - 4\left(\frac{\pi R^2}{4}\right) = 4R^2 - \pi R^2$
 $= (4 - \frac{\pi}{4})R^2 = \frac{16-\pi}{4}R^2$.
31. (d) $f(3, 4) = 3^2 + 4^2 = 25$
 $f(2, 25) = 2^2 + 25^2 = 629$
32. (d) The given expression is equal to $(1+\frac{1}{2}) (1+\frac{1}{3}) (1+\frac{1}{4}) \dots (1+\frac{1}{n})$
 $= \frac{3}{2} \cdot \frac{4}{3} \cdot \frac{5}{4} \dots \frac{n}{n-1} = \frac{n}{2} = 38$
33. (a) $(\sqrt{6}+\sqrt{3})(\sqrt{6}-\sqrt{3}) = 6-3 = 3$
The given expression is thus $3^{3/2} = 3\sqrt{3}$.
34. (b) $x^2 - 12x + 32 = x^2 - 12x + 36 - 4$
 $= (x-6)^2 - 4$
This is negative if $4 \leq x \leq 8$.
35. (a) If x is the number, obviously $x = 81y + 27$ where y is the quotient obtained when the number is divided by 81. When the number is divided by 27, the quotient will be $(3y+1)$ and the remainder will be zero.
36. (d) The given expression is equal to $\frac{168 \times 48 \times 10^{-10}}{42 \times 4 \times 10^{-4}} = 48 \times 10^{-6} = .000048$
37. (c) The expression is $7+5 - (\frac{1}{2} \times \frac{1}{2})$ of $\frac{1}{2} + \frac{1}{2} \times \frac{1}{2}$
 $= 7+5 - \frac{1}{4}$ of $\frac{1}{2} + \frac{1}{4} = 7+5 - \frac{1}{4} + \frac{1}{4}$
 $= 12 - \frac{1}{4} + \frac{1}{4} = 12$
38. (c) $P = 0.7c = 1.3s$ and
 $P+c+s = 436.5$ where P, c, s denote the cost of a pant, coat & shirt respectively.
Thus $1.3s + \frac{1.3}{0.7}s + s = 623.60$
 $(.91 + 1.3 + .7)s = 436.52$
 $\therefore s = \frac{436.52}{2.91} = 150$
39. (b) The given expression is $-(x^2-6x-12) = -(x^2-3)^2 - 21$ whose maximum value is 21 which happens for $x=3$.
40. (d) Since $22 = 2 \times 11$, the number should be divisible by 11. Applying the rule of divisibility by 11, x should be 7.
41. (d) The desired number is $\frac{10^6}{3 \times (20^6)} = 29$
42. (a) This is > 0.7 , whereas all others are less than this.

FOR & AGAINST

Should jobs be delinked from degrees?

The idea of delinking degrees from jobs is not a new one. The Public Services Committee reported, as early as 1956, that "the degree qualification should be abolished for lower and middle levels of public services (clerical jobs and junior officers). It should continue for the top level (senior officers)." The National Committee on the 10+2+3 educational structure, held in 1973 that "a policy of delinking university degrees with the recruitment for the bulk of jobs, both in the public and private sectors, is a sine qua non for the success of the new structure. While university education is necessary for senior-level managerial and executive jobs, for teaching and for other purposes such as training scientists, engineers, doctors, economists, literary persons, etc., it should not be compulsory for all the rest." The idea was repeated by A.R. Kidwai in 1974, then Chairman of UPSC, and also in the Draft National Policy on Education in 1979. In 1982 the National Institute of Educational Planning and Administration (NIEPA) declared that degrees should be delinked from jobs, and today, after PM Rajiv Gandhi's Jan 5 national broadcast, the issue is the subject of much debate.

However, it should be noted that while enrolment at the secondary school stage has increased 283.3% in the last two decades, it has increased only 128.6% in institutions of higher learning in the same period. More importantly, less than 7% of the century's total youth in the age-group 17-23 is enrolled for higher education. Furthermore, according to the estimates of the 32nd round of the National Sample Survey (1977-78), only 2.07% of the total labour force in the country has the educational qualification of "graduation and above", and of about 7m added to the labour force annually only about half a million are "higher educated". Under the circumstances, is higher education the major problem to be tackled at this stage to facilitate employment opportunities? Is not the basic question that of the lack of a socio-economic structure that can match qualifications with employment rather than one of checking "educational inflation"?

CCTimes asked its readers to voice their opinions on the subject, in its January issue. Selected views have been cited in the following columns to show what the readers feel about the subject

For

■ Today's education is not at all job-oriented and the knowledge is seldom useful in practical life. The best way is to have job-oriented courses after SSC so that many student hours will be saved. *M.V. Sonavane, Shahabad*

■ Degrees and marks are not the real measurement of learning and intelligence. Students having no knowledge of their subjects get through with brilliant marks. *Savitari Ananth, Bombay*

■ How will a master of Science be a better administrator or a clerk than a matriculate? There are many brilliant, ambitious persons who are not able to pursue higher education because of financial problems and therefore have to make do with menial jobs. Prescribing higher rather than essential qualifications amounts to violation of the Fundamental Rights guaranteed by the Constitution of India. *P.V. Sreedharan, Panna*

■ Large disparities exist in the standards of courses for various degrees offered by different universities. Moreover, a lot of anomalies are made to obtain a degree by hook or by crook. Degree being an essential requirement for jobs, students rush to the universities, thus reducing the standard of education and the efficient functioning of the universities. *Bray Mohan Agrawal, Roorkes*

■ Practically, university education is proving to be futile as very few competitions have their roots in university education. At present, almost in all fields, candidates are trained after their selection. So why should they waste their time in universities? *Y.P. Singh, Bargeon, Gonda*

Against

■ Delinking degrees from jobs would end in making India devoid of strong leaders. *P. Girish, Hyderabad*

■ A graduate is more mature and thus more suitable for these categories of jobs where public dealing is concerned. *S. Rangaraj, Madras*

■ Delinking will result in suppressing the poor and the lower middle class, who get their knowledge concerning different fields of education only in colleges. Children from these classes will find all job avenues closed to them if delinking is brought about. *Praveen Kumar Jain, New Delhi*

■ Degrees act as barriers to corruption today. The cases of corruption will increase if degrees are delinked from jobs. *Sanjay Kumar, Muzaffarpur*

■ When jobs are severed from degrees, college education will become useless in the eyes of students. Purposeless universities can be described as dead institutions which can further worsen the quality of education. *Nilay V. Anjaria, Ahmedabad*

■ If delinking is introduced, there will be hardly anybody interested in higher education. On the other hand, the employers will insist on some basic knowledge which was previously being ensured even by the devalued degrees. *Nihar Ranjan Satpathy, Puri*

■ In an abrupt decision to delink degrees from jobs, the state will aggravate the present youth unrest in India. A chaotic environment is bound to occur in the country which might give unemployed persons (and opposition parties also) an issue to

Suggestions offered by readers for improvement in higher education:

■ The posts of teachers should be offered to the intellectuals of the country. *Anang Pal Tomer, Dehra Dun*

■ It is important to link the syllabus with jobs at the degree level. *Dinesh K. Dev, Meerut*

■ The age limit for each job should be reduced to such an extent that a degree holder would not be able to apply for jobs which do not require a degree. *Nilamber Joshi, Almor*

■ A graduate degree is worthless unless higher education is pursued. So postgraduate courses should be integrated with graduate courses, e.g., B.Sc/M.Sc. *V. Lakshmi, New Delhi*

■ There should be more technical and professional institutions to impart specific skills. *Subhash Karmarker, Calcutta*

■ There should be a screening body to determine the merit and aptitude of students who wish to enter universities. There should be equality in all university courses so far as time and graduation courses are concerned. *Somesh Chaturvarty, Baraset, 24 Parganas*

GENERAL KNOWLEDGE

YOU ASK, WE ANSWER

BY SUPRIYA

- **Where is the largest atomic power plant situated and what is its generating capacity?**

Jagjit Singh Parmar, Amritsar

The largest power station in the world is situated in Leningrad (USSR). This 3 000 Mw power station was commissioned in October 1982.

- **When and by whom were the Gateway of India and India Gate (New Delhi) built?**

Ujjal Shah, Angtang (Assam)

The Gateway of India (Bombay) was constructed in 1911 and India Gate (New Delhi) was constructed in mid 1920s. India Gate is also called the All India War Memorial. Both these gates were constructed by the then British Government.

- **Rewrite in chronological order: Namdev, Shankaracharya, Ramanuja, Kabir, Fard and Nanak.**

- **Which islands constitute the West Indies?**

- **Which are the rain bearing clouds: Nimbus, Cumulus, Cirrus or Stratus?**

Gursevak Singh

The chronological order is: Shankaracharya (788-828 A.D.), Ramanuja (1017-1137 A.D.), Namdev (1270-1350 A.D.), Kabir (1398-1519 A.D.) and Nanak (1469-1539 A.D.).

The archipelago in North Atlantic between North and South America comprising Cuba, Hispaniola, Puerto Rico, Jamaica, Barbados, Trinidad and Tobago, Antigua, St Kitts-Nevis, Anguilla, St Lucia, Windward and Leeward Islands and Guyana together form the West Indies.

Of all the four types of clouds mentioned, Nimbus bring heavy rain, Cumulus clouds do not bring rain while Cirrus are thin clouds which never bring rain. Stratus clouds are grey in colour and bring light rain.

- **What is the difference between plebiscite and referendum?**
- **What is phonogram? Please elucidate.**

K C Goyal, Abohar

Plebiscite means to seek public opinion on any important public question which is later given the form of a law. In referendum, on the other hand, first a law is made and later on public opinion is taken on it.

Under this system a telegram can be booked through telephone. The charges for the telegram are paid later on receipt of the bill.

- **How many countries of the world have women presidents and prime ministers today? Please give their names.**

- **Who are the members of NATO? Where are its headquarters situated?**

Mohammad Rafi, Madhubani (Bihar)

Today except for England, no other country has a woman PM. Also no country in the world has a woman President. Margaret Thatcher is the PM of England.

The North Atlantic Treaty Organisation (NATO) with its headquarters at Brussels has 15 member states. Spain is its latest member.

(Continued from page 47)

For

■ If you can pick up a student at the end of plus 2 and make him a good army general, a doctor or an engineer, there is no reason why the same procedure cannot hold good for government services. **N Mahendran, Coimbatore**

■ A degree student of a disturbed university wastes three years or more in getting a degree he could have obtained in two years time. **Devendra Mishra, Allahabad**

■ The courses in universities are more theoretical and obsolete and have very little application to the concerned jobs. **Deepak Mathur, New Delhi**

■ It is only the candidate's calibre that should determine his future and not degree. By doing so, the pressure on colleges will be relieved and they can then serve better candidates generally interested in research and higher studies. **A V Rama Murthy, Visakhapatnam**

A MUSICAL WHO'S WHO

Tabla players	Samta Prashad Alla Rakha Khan Zakir Hussain	Naina Devi Siddeshwan Dev Malikaarjun
Sarod	Ali Akbar Khan Zarin Daruwala Saren Rani	Mansoor Nazakat Ali Salamat Ali M S
Sarangli	Bakliwal Amjad Ali Khan	Subbalakshmi
Santoor	Ram Narayan	Dr Bala Murali
Flute	Shiv Kumar Sharma	Krishna
Violin	Har Prashad Chaurasia	Neena Mehta
Shehnai	V G Jog	Rajendra Mehta
Sitar	Bismillah Khan Ravi Shankar Vilayat Khan Nikhil Bannerjee Abdul Haleem	Jagjit Singh Chitra Singh Peenaz Masani Ghulam Ali Sobha Gurtu Praveen Sultana Birju Maharaj Durga Lal Uma Sharma Roshan Kumari Samyukta
Vocalists	Zatar Kumar Gandharva Kishon Amonkar Amir Khan Bhim Sen Joshi Jas Raj Bade Ghulam Ali Khan Abdul Karim Khan Singh Bandhoo D V Paluskar Aminuddin Dagar	Panigrahi Kelu Charan Mohapatra Sonal Man Singh Yamini Kishnamurti Padma Subramaniam Swapna Sundari
	Kathak Dancers	
	Odissi	
	Bharata Natyam	
	Kuchipudi	

- **Which state in India is the largest producer of rice—Andhra Pradesh or West Bengal?**

M T Puttaraju, Bangalore

Andhra Pradesh is the largest rice producer in the country. The latest available figures* are:

	Andhra Pradesh	West Bengal	UP
1980-81	7 011	7 466	5 570
1981-82	7 868	5 833	5 898
1982-83	7 671	4 949	5 645
1983-84	8 588	7 940	6 791

* (000 metric tonnes)

Against

exploit and misuse. **Tariq Ali, Bijnore**

■ Our school education is not enough to help us develop a better understanding of the prevailing systems. It is just at the postgraduate level that a person begins to think for himself or feel capable of thinking. **Neeraj Raj Srivastava, Bhopal**

■ Delinking will result in a mad rush for employment from a very early stage. It will affect the quality and efficiency requirements of the jobs and will prove fatal. **Dhiren Kumar Dhanbad**

■ A person after having been under the care guidance and tutelage of many intellectuals for three or five years in a college or university can fare better at a time of crisis than a person who has passed a test conducted by a recruiting agency and who has only studied the prescribed syllabus. **P Prakasam, Cuddapah**

S B

BETTER ENGLISH

ACHING COMPOSITION

BY RAGHU BHATNAGAR & RAJUL BHARGAVA

Introducing yet another serial on grammar. This time on teaching composition. To help you master the skills of writing. From sentences to paragraphs. With suitable illustrations. To be covered in our forthcoming issues.

All writing involves at least two basic things: (a) putting words in a sequence, that is, one after another, and (b) making conscious choices about each one of these words. Writing, therefore, involves making of both chains and choices. But, as everyone knows, writing is a complex process. Part of its complexity lies in determining the order and the form of the words that constitute the sequence, for not every sequence is grammatical. It is in accordance with the rule-governed nature of verbal constructions. All courses in composition are, therefore based, on an understanding of those conventions which govern the sequential compatibility of words. The kind of decision one has to take is why *a*, *c*, *b* and not *b*, *c*, *a* is the correct choice like the following:

A	curious	spectacle
a	c	b
	Spectacle	curious
	b	c
		a
	or	
Most people	in the world	love peace
a	c	b
Love peace	in the world	most people
b	c	a

It will thus be seen that every composition writer is faced with two kinds of choices, one relating to the principle we called sequential compatibility and the other merely verbal, that is, between one word and another. The latter is too obvious to need elaboration: would one choose *people* or *men* in the sentence 'Most people in the world love peace'?

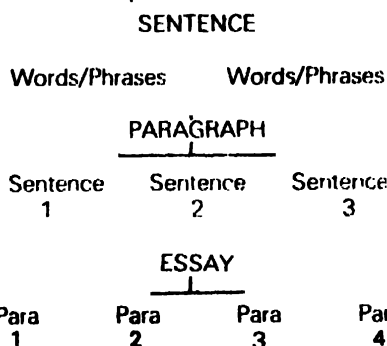
A natural corollary of the principle of sequential compatibility is the distinction between meaningful and meaningless combinations. Thus in the sentence quoted above, the meaningful combinations are: Most people/in the world/love peace.

On the other hand combinations like: people in/ in the/world love—are meaningless.

The reasons why certain combinations are meaningful are rather complex. One thing, however, is clear—there is a direct relation between information structures in the brain and their expressions as meaningful combinations. Phrase structure, in other words, is a reflex of information structure. Here, for example, are a few sentences with their natural divisions:

1. Dogs/like/the company/of their masters.
2. The world/is not/always/a happy place/to live in
3. Machines/have made/modern civilisation/possible.
4. War/means/the end/of all civilisation.
5. Colleges/give/more than mere education/to their students.

A lesson on writing composition should begin with the understanding of these interrelations between the parts of sentences. Later, if one wants to write bigger compositions (paragraphs), one would have to understand interrelations between sentences, and in even bigger compositions (essays), those between paragraphs. Thus the secret of good composition is good relations between various units. The following diagram shows these various interrelationships:



Composition—Putting together of meaningful/interrelated units

Any meaningful composition will aim at putting interrelated units together. Let us then begin with the *sentence*, since it is the basic unit of composition. Consider the following arrangement of words:

Food the away put switch off light the end.

As it stands, it makes no sense whatsoever. However, differently arranged they become meaningful:

Put the food away and switch off the

light.

It means that in English we cannot put words in any order we like. The point can be made with the help of a more simple example:

Snake a killed Ram.

This is not a meaningful sentence. Any one having even an elementary knowledge of English can rearrange it to make it meaningful. But another point emerges here. Sometimes word-order can change the entire meaning of the sentence, e.g.,

Ram killed a snake.

A snake killed Ram.

Either way word-order is an important principle of sentence construction.

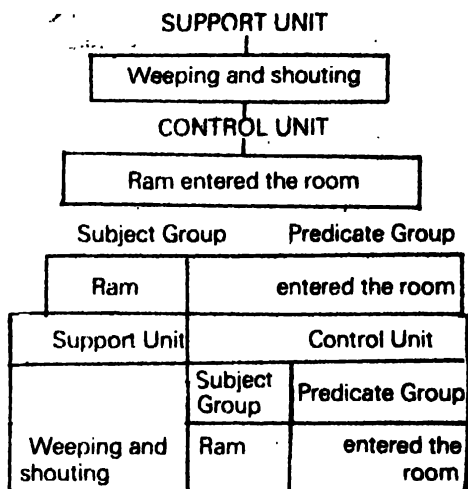
The normal word-order in an English sentence is:

Subject (S)- Verb (V)-Object (O)-Compliment (C)- Adverbial (A) that is, **S V O C A** in short. This pattern has a natural division according to which S and all that goes into it constitutes one part and V O C A put together constitute another. (Here it is worth remembering that of the VOCA the last three, namely O C A are not always present in all sentences. In other words, they are optional elements of a sentence while V is an obligatory element.) Thus S may be said to represent what may be called the subject group of words and V O C A the predicate group of words. And the normal sequence is the subject group followed by the predicate group.

The subject group and the predicate group taken together constitute a **Control Unit**, so called because it is this unit which controls everything else that occurs within a sentence. It means that besides the subject group and the predicate group other word groups can occur within a sentence, but they cannot take the place of the control unit. All they can do is support the control unit. They can, therefore, be called **Support Units**. The thing to remember is that a support unit in itself does not have meaning. It acquires meaning when taken together with or joined to a control unit. Thus the phrase 'weeping and shouting' does not convey much by itself.

However the sentence—'Weeping and shouting, Ram entered the room'—is easily comprehensible, for now 'weeping and shouting' as a support unit has been joined to a control unit, viz: 'Ram entered the room'. We can represent these facts

¹These terms have been taken from R F. Bailey, *A Survival Kit For Writing English*, Longman Cheshire Pvt Ltd, 1977



Here are some more examples of support and control units:

1. When it rains, people use umbrellas.
SU CU
2. If you are hungry, ask for some food.
SU CU
3. He goes swimming, when tired.
CU SU
4. She likes reading, though she has very little time.
CU SU
5. Finish your work, while I type the letter.
CU SU

Although we have taken very short and simple sentences in which the control units are shorter still, we can have bigger examples of the control unit.

The man facing the window to your left is about to jump out of it

Not one part of the sentence can be taken out without doing damage to the sense of the sentence. This is an important point, for it shows that the control unit is one whole, completely irreducible.

Now let us have a look at the support units. A support unit can have three positions: in the beginning of the sentence before the control unit, at the end of the sentence after the control unit, and between one part and another part of the control unit, as in the examples below:

1. At two in the afternoon each day,/he felt extremely restless. (beginning)
2. When tired/he wanted to have a swim. (beginning)
3. She wears red/but very rarely. (end)
4. They got victory/as well as money. (end)
5. His friend/a brilliant teacher./often behaved abnormally. (middle)
6. The bonus/—third in the year/—proved a great blessing. (middle)

Sometimes all the three positions are taken in the same sentence:

Their wish fulfilled./the young couple./now in their 20s/decided to lead a

pleasant life, especially soon going to have a baby.

The control unit thus can act as an independent word-group. It contains information no part of which is superfluous or of a kind which can be removed without changing/distorting the sense of the sentence. On the other hand, a support unit cannot exist independently. It has the status of a dependent word-group.

Paragraph Writing

A paragraph is a section of prose in which a particular topic is stated and developed. In other words, it is a group of sentences, all of which focus on a single subject. A well-written paragraph possesses the characteristics described below:

1. It almost always contains a topic sentence that presents the subject of the paragraph.
2. The rest of the sentences of the paragraph relate to the topic sentence in one of the following ways—
(a) lead into/up to it.
(b) explain it, by either expanding or limiting its meaning
(c) support it
(d) support or explain one of the supporting sentences
3. The topic sentence mostly occurs at, or near the beginning of the paragraph.
4. In the case of an introductory paragraph as part of a bigger composition the topic sentence ordinarily occurs at, or near, the conclusion.
5. In introductory paragraphs beginning with an 'although clause', the topic sentence often occurs somewhere near the middle.²

The topic sentence most often contains the main idea of the paragraph. Here is an example taken from Edith Hamilton's *The Greek Way*:

A Hindoo temple is a conglomeration of adornment. The lines of the building are completely hidden by the decorations. Sculptured figures and ornaments crowd its surface, stand out from it in thick masses, break it up into a bewildering series of irregular tiers. It is not a unity but a collection, rich, confused. It looks like something not planned but built this way and that as the ornament required. The conviction underlying it can be perceived: each bit of exquisitely wrought detail had a mystical meaning and the temple's exterior was important only as a means for the artist to ascribe thereon the symbols of the truth. It is decoration, not architecture.

It is evident that what is stated in the topic sentence at the beginning of the paragraph has been supported with a series of descriptive examples in the rest of

²See Beth S. Neman, *Writing Effectively*, Charles E. Merrill Co. 1983

The most important principle in writing a paragraph is the fact that each paragraph is 'one whole'. In other words, it has unity, which is the outcome of there being a single topic in each paragraph. A violation of the above principle—one topic, one paragraph—results in a bad paragraph. It can be illustrated by taking together two paragraphs one of which observes the principle of unity and the other which violates it.³

- A. When a historian of the future deals with Britain in the 20th century he may well decide that the nation's biggest problem in that period was the preservation of freedoms won centuries earlier. Between 1800 and 1900 the laws of Britain slowly caught up with the growing conviction that the individual had rights against the State, and that it was the proper function of the latter to safeguard those rights. Yet, at the same time, social and economic pressures were developing that were to endanger the liberties of the individual. Those pressures were not fully manifest until the mid-20th century when, though sentiment was still in favour of the idea that the State was made for man, the revolutionary results of technological changes were threatening to reduce the status of the individual.

- B. The immense technical achievements of 19th-century Britain would have been impossible without the work of Henry Bessemer. *His system of producing steel was still in extensive use until a few years ago, though the open-hearth process invented by Sir William Siemens is now of greater importance.* Up to 1856 steel was an expensive product, imported from Sweden and costing about £50 a ton in the money of that day. Consequently, it could be used only for a very limited range of articles. *Wrought iron was used for engines, bridges, ships, machinery and railway tracks.* Bessemer's system, whereby cheap pig-iron was converted into steel in huge retorts within half an hour, instead of the six days required by the older process, brought the cost down to £3 a ton. This means that steel, which is stronger, more resilient and longer lasting than iron, was available for engines, bridges, ships, machinery and railway tracks. Steel can also be machined more accurately than

³S.N. Burton, *Mastering English Language*, Macmillan

(Continued on page 59)

NEWS CAPSULE

AWARDED

The Lenin Peace Prize for 1983-84 posthumously to Indira Gandhi in recognition of "the outstanding contribution made by her to preserving and strengthening of peace". Sharing the honour are Vietnamese Vice-President Nguyen Huo Tho, West German public figure Joseph Weber, French scientist Jean-Marie Legat, Colombian writer Lyuis Vides and Swedish public figure Eva Palmer.

The Dadasaheb Phalke Award for 1985, carrying a cash prize of Rs 1 lakh, to Satyajit Ray for his services to Indian cinema. Other film awards for the year went to Prakash Jha's *Damul* (best picture), N.V.K. Murthy's *The Music of Satyajit Ray* (best non-fiction film), Adoor Gopalakrishnan (best direction for his *Mukhamukham*), Pratap Pothan's *Meendum Oru Kadhal Kadhai* (the Indira Gandhi award for the best first film by a director), *My Dear Kuttichathan* (best children's film), Naseeruddin Shah and Shabana Azmi (best actor and best actress in the film *Paarj*), Victor Banerjee (best supporting actor in *Ghare Baire*), Rohini Hattangady (best supporting actress in *Party*), Aravind, Suresh, Mukesh, Sonia (best child artistes in *My Dear...*), Saeed Mirza's *Mohan Joshi Haazir Ho* (best feature film on family welfare), Tapan Sinha's *Aadmi Aur Aurat* (best feature film on national integration), Shankar Nag's *Accident* (best feature film on prohibition). The awards for best regional films went to *Son Moine* (Assamese), *Ghare Baire* (Bengali), *Bandhana* (Kannada), *Mahananda* (Marathi), *Klanta Apanha* (Oriya), *Achamillai* (Tamil), *Sitara* (Telugu) and *Manik Raitong* (Khasi).

The 1985 Nehru fellowships to social scientist Harikrishna Paranjape, geologist Shitindramohan Naha and playwright G. Shankar Pillai. The fellowships announced by the Nehru memorial fund are for a period of two years and carry a monthly stipend of Rs 3,000.

The Nehru Award for engineering and technology for 1983 to former chairman of the Indian Space Commission, Satish Dhawan and the Chairman of the Atomic Energy Commission, Raja Ramanna. The award for social sciences went to former planning commission member, K.N. Raja. The awards carry a Rs 1 lakh cash prize.

APPOINTED

P.C. Alexander, former Principal Secretary to the PM as India's next High Commissioner to Britain. Alexander resigned his post recently, owning full responsibility for the misconduct of his staff involved in the latest espionage scandal. He has considerable experience in diplomacy, having headed the UN trade office in New York.

Muhammad Azeem, 47, the son of a peasant farmer in Chhatro, Kashmir, as the Mayor of Bradford, becoming Britain's first Asian Lord Mayor. Ajeem, the chairman of the Labour Party group on the city council and a senior supervisor for mosques in Bradford (Yorkshire), now has his sights on winning a parliamentary election.

Justice P.N. Bhagwati, judge of the Sup-

reme Court, as the Chief Justice of India succeeding Y.V. Chandrachud who retires July 12.

Prakash Narain, Secretary in the Ministry of Shipping and Transport, as the Chairman of the Railway Board, succeeding J.P. Gupta who retired on Jun 30.

K.D. Sharma, Ambassador to Pakistan, as the Ambassador to Spain, replacing Indu Prakash Singh, who retires.

ELECTED

M.L. Fotedar, Political Adviser to the PM, to the Rajya Sabha in a by-election from the UP Assembly constituency, unopposed.

P. Namgyal (Congress (I), from the Ladakh parliamentary constituency, defeating Omer Ali (National Conference-F) by 7,977 votes in a by-election.

S.P. Jagota, former Additional Secretary in the Ministry of External Affairs, as Chairman of the Geneva-based International Law Commission at the body's 37th annual session. Jagota has been a member of the commission since 1976 and his major contribution has been in the field of the law of the sea.

Former Union Law Minister, Shiv Shankar to the Rajya Sabha in a by-election from the Gujarat Assembly constituency, defeating common Opposition candidate Jaymal Thakore (Independent) by 121 votes.

Former Himachal Pradesh PWD Minister, Sukh Ram, to the Lok Sabha in the by-election to the Mandi parliamentary seat, defeating BJP's Madhukar by 1,25,000 votes. With Sukh Ram's election, the Congress (I) has bagged all the four Lok Sabha seats from the hilly state.

The Congress (I)'s D.R. Negi, Devi Singh and Thakur Singh to the Himachal Assembly, taking the party's strength in the 68-member house to 58. Negi wrested the Kinnaur seat from Independent T.S. Negi while the latter two retained their Lahaul-Spiti and Bharmour Assembly seats.

VISITED

US Commerce Secretary, Malcolm Baldrige, on May 16 on an exploratory business trip to report back to President Ronald Reagan on the eve of PM Rajiv Gandhi's visit to Washington. During his stay in New Delhi Baldrige held wide-ranging talks with the ministers for finance and commerce and industry, the foreign secretary and leaders of the corporate sector on ways to strengthen Indo-US commercial ties. He also called on the PM.

Sri Lankan Foreign Affairs Adviser, Esmond Wilmamasinghe on May 16 for talks with the PM and other officials on various aspects of the island nation's ethnic problem. Wilmamasinghe stopped over in New Delhi on his way home from Thimphu where he attended the SARC ministerial meeting.

SCIENCE

Valuable mission: Anuradha, India's sophisticated cosmic ray detector, returned home (Earth) on May 6 aboard the space shut-

tle Challenger after astronauts completed final experiments in the orbital research voyage. What they learned from the week in space could provide greater knowledge of stars, cosmic rays and the earth's atmosphere, invaluable experience in space manufacturing process and new insights into the effects of weightlessness on animals and the human body. Part of the mission were two monkeys and two dozen rats. The mission had gotten off to a shaky start when five of the 15 research experiments failed or refused to start. But, working with specialists in Houston, the astronauts managed to repair them. They grew crystals that scientists expect to be of higher quality and greater purity than those grown in the gravity of earth. The improved quality of certain crystals would be of valuable interest to manufacturers of computer chips, medical, environmental sensors and infra-red devices.

Futuristic vaccine? American scientists have used a new technique to isolate genes from the bacteria that cause tuberculosis and leprosy and they say this may help them develop a single vaccine against these major diseases. Vaccines now exist for both TB and leprosy but they have major shortcomings. The scientists hope the new work will lead to the development of a vaccine that will be highly effective and available in large quantities. The idea is to isolate the bacterial genes that produce proteins that the human system recognises as foreign. Then these genes would be spliced into the genetic material of a harmless bacteria which would be used as a vaccine.

To be or not to be: Humans are capable of using their facial expressions to influence their emotions, a phenomenon which can be used to beat the lie detector test, according to Paul Ekman, a professor of psychiatry at the University of California. In other words, "you become what you put on your face." Tests on college students showed that a happy face can produce a happy body; also by coaching students to move their facial muscles in certain ways, it was found that their bodies also acted as if the person was afraid, disgusted, or amused, angry, surprised, sad or contemptuous.

EDUCATION

Underutilised: A survey by the Department of Science and Technology says only 9% of the country's engineering and technology Ph.D. holders are in industry, and the remaining 91% engaged in general services and higher education. The survey found that industry employed more foreign degree holders than those with Indian Ph.Ds in the ratio of 3:1. A disturbing finding pertained to the Ph.D. employees' salaries. The median salary is only Rs 1,500, the lowest salary Rs 900 and the highest Rs 3,000. In the US in 1979, the median monthly salary of a Ph.D. holder was \$2,800 in industry \$2,500 in government service and \$2,200 in educational institutions. "It is distressing to note that there were a number of doctorates getting low salaries, especially in the major scientific departments," the report commented. The primary objective of the survey was to find

whether doctorate holders were properly utilised or not.

DEFENCE

India and Italy will cooperate in defence research and development under an agreement described as a milestone in bilateral ties. The agreement the first such to be signed by India with any West European country provides for exchange of information components and sub-systems under development or production in either country. The areas of cooperation could include electronic warfare systems. The agreement which followed the visit to India by Italian Defence Minister Giovanni Spadolini last year provides for safeguarding the confidentiality of equipment that may be exchanged between the two countries for research and development.

France snubs US: France has told the US it will not participate in President Reagan's strategic defence initiative programme called star wars. French President Francois Mitterrand told Reagan during the seven nation economic summit at Bonn that the programme was of no interest to France. He repeated a proposal for a Europe-based space technology research programme code named eureka.

West European fighter plane binge: Britain West Germany France Italy and Spain have embarked on a project to manufacture a twin-engine fighter plane for the future—Europe's biggest joint venture in aircraft production. The five NATO members will meet on Jun 17 in London to draw up the guidelines for the project called euro-fighter. The project is estimated to cost £28b.

NEIGHBOURS

Nepal and the Maldives have called for the declaration of the Indian Ocean as a zone of peace and withdrawal of superpower military presence in the region. The call came in a joint statement issued in Kathmandu at the end of a four day state visit to Nepal by Maldivian President Maumoon Abdul Gayoom. Gayoom had "fruitful talks with King Birendra on bilateral regional and international issues. They expressed satisfaction at the progress made so far by the South Asian Regional Cooperation (SARC) and agreed that cooperation between states in the region would promote collective self-reliance and peace and stability. They expressed concern at the situation in Afghanistan and Kampuchea and appealed for a political settlement of the problems based on the withdrawal of foreign forces and the peoples right to self-determination.

Zia's wrath: Seventeen Pakistani military officers being tried for plotting to overthrow the Zia government have been tortured in prison, according to Amnesty International. The London-based human rights organisation Amnesty said the accused were among a larger group of people most of them military personnel who were arrested between January and April last year. Five civilians are also among them. Since their arrest the accused have been given only limited access to their families and tortured by being beaten and given electric shocks. They were deprived of food for several days, denied access to lawyers, and kept con-

tinuously in prison under harsh conditions. Amnesty, in its report released on May 12, demanded that the prisoners be tried in open court with full legal safeguards to ensure a fair trial. Also, there should be no admission of evidence or testimony obtained under torture, it said.

By-elections in the eight-month-old **Nepalese Cabinet** may change on May 14. **Deported Radhakrishna Subbiah** to replace the outgoing Foreign Minister, Padma Bahadur Khatiwadha dropped two controversial ministers of state and inducted two deputy ministers. Subbiah, a former ambassador to India, will also join after education Khatiwadha bed-ridden for seven months, submitted his resignation on May 13.

Jayewardene's draconian step: Sri Lankan President J R Jayewardene on May 23 announced he will confer executive powers on all members of Parliament and will not hesitate to declare martial law if the need arises. The announcement which took political observers by surprise means that parliamentarians will be in charge of security in their own electorates. Jayewardene said the measure was vital because the army and police alone could not tackle the terrorist menace. He asked all MPs to reside in their electorates so they could co-ordinate with the security forces. Incidentally, Sri Lanka will spend \$72m this year above the budgeted \$131m on defence bringing daily expenditure on it to \$600 000. Finance Minister Ronnie De Mel told a parade in Colombo on May 24 that defence spending had risen 10-fold in nine years, from \$12m in 1978 and the government was prepared to spend 100 times that to defend the country. Defence spending has turned a projected surplus of \$62m into a budget deficit of \$149m.

Pakistan's defence obsession. Pakistan will spend over \$2 066m on its defence during the new financial year beginning Jul 1—11.5% more than in the previous year. Finance Minister Mahbubul Haq who presented the budget for 1985-86 on May 23 anticipated a resource gap of \$850m in the \$7927.7m budget. He announced several measures to fill the gap including a 23% increase in electricity petrol and gas charges and plans for unloading state-run industrial units worth \$125m. Other features of the budget: 12.5% general wage increase a 5% cess on all imports to finance a vigorous education plan a 15% reduction in the maximum income-tax rate and the floating of a series of government bonds. This was the first budget in eight years to be presented before an elected Assembly.

ECONOMY—National

India's foreign exchange reserves recorded a sharp increase of Rs 318 crores in 1984-85 and stood at Rs 6 816.8 crores on Mar 31 this year. The sharpest increase was in the month of March 1985 when the reserves jumped by Rs 571 crores, nearly 2.5 times the increase in the previous month. During the first ten months of 1984-85 exports increased by 18.6% to Rs 9 582.77 crores while imports grew by 8.4% to Rs 13 122.13 crores. The trade deficit which stood at Rs 3 863.87 crores during Apr-Jun 1985 was thus lower by Rs 430.89 crores from the Rs 4 294.76 crores deficit for the corresponding period of last year. Industrial production during the first ten months of 1984-85 showed an increase of 5.9%. Industries which showed an increase of

more than 10% were: electrical machinery (10.9%), crude petroleum (11.4%), fertilisers (20%). Coal and valuable minerals went up by 8.7% and 8.7% respectively. The increase in the foodgrains stock was 45.22%. The total stock on Mar 31 stood at 237.80 lakh tonnes.

Real wages in India are declining at Rs 2,500 crores every year, says the annual report of the Department of Labour. The number of Indian workers abroad has been rising steadily since the oil boom in the mid-1970s. In 1979 the number in West Asia stood at 224 000. The report admits that the numbers have started declining in the last two years due to the slowing down of the tempo of development and the Gulf war. The ministry's report covers a number of areas like providing stringent safety measures in chemical plants, social security, wages and bonus and industrial relations. The government proposes to enact a law to regulate the working conditions, safety and health of the workers in the building and construction industry. It also records the Centre's keenness to improve the conditions of unorganised labour such as fishermen, leather workers and the handloom and the powerloom units.

Indo-Arab cooperation: India and the Arab nations on May 4 decided to set up an Indo Arab trading company, a bank and chamber of commerce. The decision was taken at the first ever Indo Arab seminar on trade, economic and technical cooperation held in New Delhi and attended by representatives of 17 Arab countries. The seminar felt that updating traditional skills, new and renewable sources of energy, pollution control, preservation of environment and energy conservation were areas where India and the Arab countries could work in cooperation. It also highlighted possibilities of cooperation in increasing food production, food management, dairy farming and exchange of experience and research in important non-food crops.

Rihand gets World Bank assistance: The World Bank has agreed to provide \$250m for the national thermal power corporation's Rihand power transmission project. With this, the bank has committed a total assistance of \$2650.8m for the NTPC—the largest quantum of assistance given to any single organisation. The Rihand project will help meet the power demand in the northern region by providing transmission links between the Rihand and Singrauli power stations in Uttar Pradesh and the cities of Delhi, Panipat, Kanpur and Jaipur, the main load centres in the region.

Finance Bill: Finance Minister V P Singh on May 8 announced a scheme for floatation of bonds by selected public undertakings in high priority areas, particularly telecommunications and power. The value of the bonds will be exempted from wealth tax. Moving the Finance Bill in the Lok Sabha on that date, Singh also announced further concessions in excise and customs. Preparations of pen masala have been exempted from excise duty, the rate of deduction of tax at source in lottery money has been reduced from 30% to 25%. The concessions which totalled Rs 16.92 crores are mainly for the small scale sector, including duty exemption for tyres, tubes and flaps for scooters, matches, marble and items under Article 66 of central excise.

...and the World Bank, on May 10, announced that the assistance—totaling \$1.5 million—covers five projects—the Maharashtra petrochemicals, two Yamuna river development projects and agricultural extension service.

ECONOMY—International

USA's 32 favoured nations: US President, Ronald Reagan, has designated 32 nations to receive benefits under a law passed by Congress giving preferential American trade treatment to developing nations. They will receive exemption from specific competitive requirements in accordance with a law known as the generalised system of preferences. The countries, determined on the basis of economic development and general living standards, are Bangladesh, Bourkina Fasso, Bhutan, Botswana, Burundi, Benin, Cape Verde, Central African Republic, Chad, Comoros, Djibouti, Equatorial Guinea, Gambia, Guinea-Bissau, Haiti, Lesotho, Malawi, Maldives, Mali, Nepal, Niger, Rwanda, Sao Tome and Principe, Sierra Leone, Somalia, Sudan, Tanzania, Togo, Uganda, Western Samoa and Yemen Arab Republic.

IMF predicts price rise: The IMF forecast that the erosion of the real commodity prices during 1981-82 should have a restraining influence on supplies of commodities during the second half of the 1980's, thus tending to push up prices. In its world economic outlook report, the IMF said, whereas the effects of the large 1984 agricultural harvests will be felt on the prices at least through the first half of 1985, the likely return of production to more usual levels in 1985 may permit an increase in prices in the latter half of 1985 and in 1986. Metal prices are likely to increase in both years as a result of the significant drawdowns in stocks in 1984 and increase in demand. However, the IMF said in 1985 the overall commodity prices are projected to fall by 2% in terms of the US dollar, compared with the 2% increase recorded in 1984.

STATES

Maharashtra celebrated its silver jubilee on May 2 with an impressive inter-services marchpast punctuated by a flypast of helicopters and Jaguar aircraft of the Indian air force. Acting Governor K. Madhava Reddy took the salute and delivered a speech in Marathi. Three major programmes were launched by the state government on the occasion—provision of drinking water facilities to problem villages, afforestation and promotion of the use of non-conventional sources of energy in rural areas.

Commission to review reservation system in Kerala has been constituted by the state government to review the reservation system in educational institutions and the grant of monetary concessions to students. The commission, headed by P. Narayana Pillai of the high court, has been asked to submit its report in two years.

EVENTS—National

Indo-Gulf contract to Italy: The government has awarded the contract for designing and supplying imported equipment for the giant Rs 700 crore Indo-Gulf fertiliser plant to an Italian concern. The contract with Snam

provides for the completion of the project in 36 months. The sub-contract for supervision of the execution of the plant, which has 40% gulf shareholding, has been given to the Projects and Development India Ltd.

The Central prohibition committee has recommended that one per cent of the revenue earned through liquor sales be used exclusively for alcohol and drug abuse control. At its 12th meeting in New Delhi on May 11, it called for extensive use of the media to create awareness against alcoholism and drug abuse among the vulnerable sections. It asked the government to enact a unified law for the prevention of drug trafficking, develop a comprehensive strategy to tackle the problems of alcoholism and drug abuse, expand facilities for treatment of addicts, and explore the possibility of availing funds for creating infrastructure for research and training and consultancy on the twin problems.

India and Pakistan on May 13 agreed to resume their political dialogue at the foreign secretaries' level in New Delhi on Jul 30. The agreement to resume the dialogue was the outcome of talks between foreign secretaries, Romesh Bhandari and Niaz Naik in Thimphu, Bhutan, where they attended the South Asian ministerial meeting. The two foreign secretaries will resume all aspects of bilateral relations and Pakistan is "very keen" that the talks should make some progress with regard to the proposals for a non-aggression pact and a treaty for friendship and peace, an announcement said.

The Jha committee report has suggested that it be the same as the calendar year. "The Jan-Dec period as financial year offers the most advantageous alternative," the committee report, presented to Parliament on May 17, said. The committee said the south-west monsoon will be finished by November and its impact on the economy could be assessed. A changeover would necessitate changes in the taxation laws and other systems, statistical data compilation. The transition will, therefore, have to be carefully planned and implemented. The committee, headed by economist, L.K. Jha, felt that it would be possible to change over to a Jan-Dec financial year by Jan 1, 1987.

Five-day week: All Central Government offices will observe a five-day week beginning Jun 3, it was announced on May 20; the working day will be longer by an hour to make up for the additional holiday on Saturday. A five-day week is expected to help increase the overall efficiency of the government machinery. An official announcement said the government hoped its employees would be able to "respond to the new challenges in a more meaningful way with the introduction of this reform."

Long-awaited intervention: The PM is understood to have intervened to end the 'god-father' system for new IAS and civil services entrants. Under the system, senior civil servants were able to arrange the posting of their kin to states of their choice after the first 20 meritorious candidates have exercised their option. The system was found to have worked to the detriment of the sensitive northeastern states where only 'tailenders' were being posted. According to the Statesman newspaper, the postings will be decided by a computer henceforth.

Hike in IA fares: Indian Airlines on May

HARRY BARNES

PASSAGE FROM INDIA



The last four years with their highs and lows have perhaps been the most tumultuous for Indo-US relations—a period witnessed by US Ambassador to India, Harry Barnes Jr. The late PM Indira Gandhi's visit to the US in 1982 laid the foundations of mutual understanding between two of the world's greatest democracies. Then, in 1984 the festering Punjab problem reached its most horrific proportions with India subtly hinting at a US involvement. Mrs Gandhi's brutal assassination in October 1984 threatened to destroy whatever she had achieved by way of strengthening Indo-US ties. The reins of the country were passed on to Rajiv Gandhi—an enigma to both Indian and foreign political spectators because of his recent entry into politics. And ultimately the Bhopal tragedy in December, which many thought was the closing chapter in Indo-US relations.

Surprisingly though, Indo-US ties, defying all predictions, weathered these upheavals with remarkable equanimity. Thanks to deft handling by Harry Barnes. For not only did Barnes, during his tenure as Ambassador succeed in preserving the essential fabric of the unpredictable love-hate relationship of the two countries but also left his distinctive stamp on them by cashing in on the mutual desires of both the re-elected Reagan and the newly-elected Rajiv to know each other better. It was during Barnes' ambassadorial stint in India that the total trade turnover between the two countries doubled to well over \$4,000m a year. Specially noteworthy are their technology-transfer agreements as well as collaboration in the innovative world of science.

Barnes, however, will not be here to witness the furthering of relations between the countries which he nurtured with such enthusiasm. He now leaves for Chile as US Ambassador to this tiny South American country with a sense of satisfaction at the improved Indo-US ties and slight regret that he could not stay in India a little longer.

23 announced it was hiking its domestic fares by 14.5%. The hike, to be effective from Jun 1, was necessitated by the increase in fuel and operational costs. IA last increased its fares in 1980.

EVENTS—International

Poland expels US diplomats: The Polish government, on May 3, ordered the expulsion of two US diplomats who were accused of taking part in an illegal pro-Solidarity May Day parade. The diplomats were William Harwood, first secretary at the American embassy, and David Hopper, consul at the American consulate in Krakow. The diplomats were allegedly part of a group and carrying posters of hostile contents.

Chile's chilling state of siege: The military government in Chile, on May 6, decreed a 90-day extension of the state of siege to keep political activity banned throughout the country. In addition, the decree maintains a ban on publication of six opposition magazines and on all meetings not authorised by the government. President Augusto Pinochet, an army general who has been in power since 1973, imposed the state of siege last November to combat

an upsurge of guerrilla sabotage and to end mass demonstrations for a return to democracy.

MISCELLANY

Growing superpower impotence: The superpowers are losing their ability to control regional conflicts such as those in the Gulf and Central America, according to the London-based International Institute for Strategic Studies, a privately-funded research body. "No state patronised by a superpower has been able to vanquish its opposition, no combatant has been so deprived of arms that it had to seek a settlement of the conflict... in short, the erosion of the superpower ability to control regional conflicts continued," the institute said in a report. The trend threw greater responsibility on regional bodies such as the Gulf Cooperation Council (GCC), the Association of South-East Asian Nations (ASEAN) and the Contadora group in Central America. The institute noted that this trend reflected a change in the superpowers themselves. "The US, after withdrawing from Lebanon, has once again shown caution with respect to regional involvements. And Soviet leaders, too, do not seem overkeen to undertake wider military commitments.

DIED

Carter Brown, 61, one of the world's most prolific thriller writers, on May 6 in Sydney, Australia, after a long illness. In a 32-year-old career, Brown (real name: Alan Yates) wrote more than 270 books which sold more than 55m copies.

P. Sundarayya, 73, the founder general-secretary of the Communist Party of India(M) and a leader of the Telangana movement in Andhra Pradesh, on May 19, following kidney failure. Sundarayya shot to fame when he pioneered the first armed struggle against the Razakar regime of the Nizam. He was also prominent in the freedom struggle and was elected to the first Lok Sabha.

Prof Raj Krishna, 59, one of the country's foremost economists, on May 20 in Rome following a heart attack. The Chicago University-educated economist had specialised in the study of employment in conditions of poverty in the Third World and was an acknowledged expert on agricultural economics. He was in Rome on a UN assignment.

A.P.

CAREER NEWS

MEDIA COURSES

The medium is the message; and to work with one of the several communication media is bound to be nothing short of exciting or aspiring youngsters. The Xavier Institute of Communications which conducts courses in Journalism, Advertising, Public Relations and Film is introducing courses in Video Production and Word Processors for writers, in the academic year beginning in July. A Film Appreciation Course in collaboration with the Film and TV Institute, Pune is also to be conducted by the institute.

For details please contact The Institute of Communications, St Xavier's College, Bombay 400 001.

A BIT(E) OF BARC

In this atomic age, who wouldn't jump at the opportunity of doing a course in Nuclear Science and Engineering?

Bhabha Atomic Research Centre (BARC) offers excellent career opportunities for motivated Engineering graduates and Science postgraduates to join their one-year orientation course in Nuclear Science and Engineering. Those who wish to attend the course will be under contractual obligation to serve the centre for a period of three years. An added advantage of this course is that those who complete the course, successfully, will be absorbed as Scientific Officers in any one of the BARC units/projects located in Bombay, Kalpakkam, Indore, Kota, Naroda, Tarapur, Kakrapar, Baroda, Talcher, Tuticorin, Thal-Vishet, Managuru and Hyderabad.

Well, then, if you are interested and less than 26 years as on Sep 1, 1985 (relaxable by five years for SC/ST candidates), you may apply, provided you fulfil the eligibility conditions (see *TDI*, May 25 1985). But you must apply before Jul 20, 1985. For further details and application

form, send a self-addressed envelope (23X12 cm), with stamps worth Rs 1.30 to the Deputy Establishment Officer (R-IV), Bhabha Atomic Research Centre, Central Complex, Trombay, Bombay-400 085, clearly indicating the subjects for which the forms are required.

BITS OF TEACHING

How do you like the idea of sharing your knowledge with the younger generation? And the idea of preparing teaching material in related disciplines, and participating in team work aimed at innovation and modernisation? Like it? Then you might as well apply for faculty positions at various levels (Professors, Assistant Lecturers and Teaching Assistants) in disciplines like Chemical, Civil, Electrical and Electronic and Mechanical Engineering; Computer Science, Instrumentation, Pharmacy, Management; Biosciences; Chemistry, Economics, Mathematics, Physics; Science and Technology Development, Museum Studies, Engineering Technology and English in the Birla Institute of Technology and Sciences (BITS), Pilani.

All the necessary details are available in the free booklet entitled "Introducing BITS to Prospective Faculty, 1985" obtainable from A.N. Bhargava, Registrar, Birla Institute of Technology and Science, Pilani-333 031. Your request letter should be enclosed in a self-addressed, stamped envelope (30X26 cm) with stamps worth Rs 2.50 and marked 'FR/1/85'.

No hurry! You have one complete year (from May 15, 1985) to ponder over the particulars required, since the institute will be reviewing, more than once, all cases that accumulate during this period.

MAN-MANAGEMENT COURSE

Effective utilisation of human resources is a skill in itself. And the skill comes extremely handy in jobs of every kind

since practically every job—in the government or in the public sector or even in an industry—involves interaction with persons.

The Shri Ram Centre for Industrial Relations and Human Resources offers postgraduate diploma in personnel management, with a view to equipping the participants with essential conceptual knowledge and operational skills required for man-management.

For prospectus and admission form, write to The Administrative Officer, Shri Ram Centre for Industrial Relations and Human Resources, No 5, Sadhu Vaswani Marg, New Delhi-110 005, along with an IPO for Rs 10.

The centre is a little choosy about selecting candidates and the seats are limited to 25. So hurry up! The last date for receiving completed applications is Jul 9, 1985.

The one-year programme, commencing in September 1985, is open to (a) graduates with a minimum of three years' executive working experience in personnel management, industrial relations or related fields or (b) postgraduates in relevant disciplines like Social Work, Psychology, Sociology or Economics. Army personnel and candidates sponsored by organisations will be given preference.

GIC (AAO) EXAM

The Assistant Administrative Officer (AAO-Generalist) Exam conducted by General Insurance Corporation of India (GIC) is to be held on Oct 6, 1985 instead of Sep 15, 1985; as announced earlier.

Completed applications should reach the advertiser on or before Jul 20, 1985 instead of Jun 6, 1985. For details write to GIC, Industrial Assurance Building, 4th Floor, Churchgate, Bombay-400 020.

SPORTS

Got an interview round the corner? Is your preparation complete? Are you familiar with sporting issues? If not, it's time you were. For our research tells us that 'sporting' issues in the news always figure in interviews and written tests. Issues like the football riot in Brussels. The forthcoming Ashes series... Sound answers should tell them you're an all-rounder. And all-rounders always top the list.

FOOTBALL

KICK OFF WITH VIOLENCE

BY NOVY KAPADIA

The Brussels violence, between supporters of Liverpool (England) and Juventus (Italy) prior to the European Champions Cup final on May 29, is the culmination of two decades of intermittent violent episodes at football stadia, all over the world. The death toll at Brussels was 38 and over 400 injured, most of them Italians (including a 10-year-old boy Andrea Casula, the youngest victim and the oldest, 51-year-old Dionisio Fabbro, a former soccer player).

In violent episodes during or after football matches in the last two decades, the death toll has often been more than at Brussels but this incident was particularly macabre and sinister for the simple reason that for the first time in football history, a group of fans have indulged in organised violence prior to the start of the match.

It must be stressed that the Liverpool fans who started the riots at the Heysel stadium in Brussels were prepared as they had smuggled flagpoles, firecrackers and knives into the stadium. Also, what is disturbing is the extreme intolerance of the Liverpool fans who began pelting Italian and neutral spectators with fireworks and bottles, resulting in panic, stampede and collapse of a wall and the ensuing casualties.

In previous incidents of football violence, rioting took place after the match, caused mostly by intoxicated spectators unable to bear defeat. For instance, on May 24, 1964, rioting left 300 dead and 500 injured after Argentina beat Peru by a last-minute goal in an Olympic Games qualifying match in Lima. Again on Sep 17, 1968, violence after a second division match in Kayseri, Turkey left 40 dead and 600 injured. On Jan 2, 1970, 66 people were killed in rioting at a local match between Glasgow Rangers and Celtic in Glasgow, Scotland.

Football violence was not confined to Europe and South America only. It spread to Africa and India also. On Aug 14, 1979, violence at a match in Lagos, Nigeria claimed 24 lives. Again on Aug 16, 1980, during a match between traditional rivals East Bengal and Mohun Bagan in Calcutta, there was fighting amongst the fans following a violent tackle on the field. The ensuing stampede left 16 dead and 100 injured. On Nov 18, 1982, 24 people died and 200 were injured in a stampede on an exit ramp in Cali, Colombia after a league match. The stampede began when fans on top of a grandstand began urinating and throwing firecrackers on those below. On Feb 28, 1984, British fans caused nearly \$1m



All in the game: The scene after the rampage at Heysel stadium, Brussels. Inset: Mangled bodies of unfortunate spectators.

damage in and around the Parc de Princes stadium in Paris after a friendly international between France and England, in which the former won 2-0. Again on May 8, 1984, a fan of a British club Tottenham Hotspur was shot dead and 200 of the club's supporters were injured after a rampage through the streets of Brussels before and after a match in the UEFA Cup final against local side Anderlecht.

An analysis of these incidents will reveal that in the past couple of years, football violence

Britain. Rioting mobs, supposedly supporters, indulge in a looting spree ransacking shops and business establishments in the vicinity and destroying public transport, like railways and buses in which they travel. The annual England vs Scotland football match, with a 100 years tradition, has been terminated in England as the vandalism of the soccer fans made London unsafe before and after the match. Why has this phenomenon developed amongst the supposedly phlegmatic British soccer fans?

Sociologists and other experts say that soccer supporters tend to use the game to vent nationalistic fervour, class solidarity and frustrations over unemployment and other problems of modern urban life. Jacques Van Rillaer, a specialist in sports psychology at Belgium's Catholic University of Louvain, feels that noise in sports stadia heightens emotions and spectators get caught up in the emotion of a crowd and act differently than they normally would. Dr George Gaskell, a social psychologist at the London School of Economics, feels that soccer violence in Britain is rampant in areas hardest hit by unemployment and crime. He is of the opinion that football is one of the few remaining institutions where a sort of identity, a source of group pride exists for the deprived people.

It is this identity, coupled with modern economic situations like spiralling inflation and unemployment which have accentuated soccer violence. It must be remembered that the tensions of partisanship tend to be more acute for the working class and unemployed in general. The middle and upper classes always have class loyalties and values and the security to sustain them. For the working class, allegiance to a football team may be their only contact with values outside the narrow concerns of mere survival.

Decline of religion, the splintered family and subsequent deterioration in moral and social values has left a large segment of the youth in Britain bewildered and frustrated. In such a situation, fierce commitment to a football team arouses atavistic feelings as it is the preservation of an image or a cult. This explains partisan commitment but the intolerance of soccer fans is a recent phenomenon, which also has socio-economic and sociological roots.

The chairman of the Liverpool F.C., John Smith, and some opposition MPs in Britain blamed the National Front (a fascist organisation which believes in racial superiority) for the violence at the Heysel stadium. The use of popular sports like football to arouse jingoistic feelings amongst the youth is a practice which started with the Nazis in Germany in the 1930s. It is still being followed in spite of pious homilies by sports administrators that politics and sports should not mix. With increasing publicity being given to sports (most television networks in Europe have live telecasts of the European Cup final), major sports events are being repeatedly used to convey a political message, as is evident from the boycott of the Olympics in 1976, 1980 and 1984 by various nations.

Another reason for violence amongst soccer fans may be traced to that much maligned word 'professionalism'. Basically the word should embody everything good in sports for which you are paid. It is the quest for excellence; but the media has distorted and stretched

THE BLESSED GAME.

The riots, the hooliganism, the violence... the dead and the injured. This is the football scene the world over. But the game didn't always have a bloody history. In fact, about a century ago, football in England was promoted by the Church!

As the Anglican Church was faced with a recruitment crisis leading to fewer intellectuals entering priesthood, the Church decided to propagate "muscular Christianity". As part of this process, the Church promoted healthy pursuits among the working class like football and football clubs. This assumption was based on the Victorian ethic of self-help and an attempt to rid the workers of bad habits like constant drinking.

Above all, the Church encouraged football and sports among the British people because of political anxiety in British society brought on by mounting threats to the country's industrial supremacy from Prussia and the US. In both the latter societies sports had generated widespread combativeness. In Prussia, the gymnastic

movement became a vehicle for militant nationalism while in the US, sport expressed the social Darwinist philosophy of the survival of the fittest. Winning was all important for both American business and American sport. Hence, Britain decided to use football as a social top as well as an education process for the working class.

Yet another unbelievable characteristic associated with the game in the early days—when the penalty kick was introduced towards the end of the 1880s, many amateurs (Sir Francis Marnin, Lord Kinnaird, Sir Charles Alcock) of clubs like Old Etonians and Oxford University objected to it. They said that the penalty kick was against the ethics of the game, that no defender would deliberately cheat, that he was being harshly penalised for an error of judgment...

Today, be it on the playing field or in the packed stands, it's a different story... a story of drunkenness, unhealthy rivalry, bloody violence, false nationalism...

the word to such an extent that it has come to reflect everything which is seedy and pretentious in the game. For example, Jimmy Hill, noted television football commentator in Britain, defended ploys such as stealing a few yards at a throw-in, standing on the ball at free-kicks to prevent them being taken quickly, time wasting, pressurising the referee and body checking elusive opponents and felt they were legitimate. Such ploys are at best gamesmanship and at worst straightforward cheating. The media by coining such gimmicks professionalising, has given sport a bad image and confused the legions of fans who now adopt the philosophy that victory must be obtained at all costs, as they see their soccer heroes regularly indulge in acts bordering on cheating. And one can venture to remark that the pursuit of dishonest advantage and the excessive exultation in victory are not the ethics of the working class who support the football teams in Britain. They are the ethics of multinationals, advertising agencies and television companies.

of a society which needs winners to legitimise prevalent enduring inequalities.

The method of gaining advantage through deception has confused football fans, as they would like to associate their soccer heroes with the traditional virtues of manliness, honesty and standing up for their rights. However, the changing values in the football field have left its legions of supporters bemused and frustrated, resulting in intolerance and repeated violence.

To curb football violence, the anachronistic belief that sports and politics do not mix should be shelved. Earnest efforts should be made by all peace loving nations to make sports an ideology to unite mankind and encourage friendship, solidarity and understanding between people. Dishonest advantage in sports must be exposed and not condoned as professionalism. Unless such remedial measures are urgently taken, football stadiums may soon become a platform for war with or without weapons and an outlet for suppressed frustration and violence.

THE ASHES

THE BATTLE ROYAL

Mention 'The Ashes' to any cricket lover and it evokes memories of not just an England versus Australia cricket series but over a hundred years of controversy, excitement and sensation. Basically, The Ashes is a contest between the two oldest cricket playing nations of the world, England and Australia. Yet winning The Ashes can stir emotions with a churning intensity and create a sense of incessant euphoria amongst the victors of the series, either England or Australia.

What are The Ashes? It is not a glittering prize nor a very remunerative financial reward. It is just the charred remains of a century-old length of wood. Yet winning The Ashes brings grown-up men to tears. The origin of The Ashes is also a case of truth is stranger than fiction!

Test matches between England and Australia commenced in 1877. The first-ever Test

Gold dust: The Ashes—charred remains of a burnt stump—the century-old cricketing bone of contention between the Aussies and the English.



at Melbourne in 1877 which Australia won by 46 runs. From 1877 till 1882, eight Test matches were played between England and Australia but not for 'The Ashes'. Then started the ninth-ever Test match between the two arch-rivals at the Oval, Surrey on Aug 28, 1882. This match is generally considered the greatest Test match of all time. Australia totalled just 185 runs in two innings, yet won the match by seven runs, amidst nail-biting tension.

On the opening day of the Test match, Australia were dismissed for just 63 runs. England in reply scored 101 runs in the first innings. Australia got off to a good start in the second innings and were 66 for no loss but crumbled to 122 all out. England needed just 85 runs to win but were bowled out for 78. Australia's fast bowler F.R. Spofforth destroyed England with match-winning figures of 14 for 90. Spofforth, the best fast bowler of his time, with a devastating breakback, was known as the 'Demon'. He used to stay in the countryside in Australia and came on horseback for most of his matches. At the Oval he and his colleague H.F. Boyle bowled 12 consecutive maiden overs, by maintaining a tight line and length. Such was the tension generated at the Oval by this match, that one spectator died from overexcitement and another is said to have chewed clean through his umbrella. This was England's first-ever defeat on English soil and led to national mourning. Hence on the following morning, the *Sporting Times* newspaper printed a mock obituary, which has now become a historic landmark in cricket history, as it led to the initiation of the idea of 'The Ashes'. The announcement was as follows:

In Affectionate Remembrance
of
ENGLISH CRICKET
which died at the Oval
on
29 August, 1882.
Deeply lamented by a large circle
Of sorrowing Friends and Acquaintances
R.I.P.

N.B. The body will be cremated and the Ashes taken to Australia.

Within a matter of weeks, the English team were on the boat heading for Australia, seeking revenge. At a dinner in London before the England squad left, their captain, Ivo Bligh, jokingly declared that he hoped to recover those 'Ashes'. This joke soon became a symbol of supremacy in cricket.

During the 1982-83 series in Australia, the England team mastered the menace of Spofforth. After Australia had won the First Test, England won the next two Tests and the rubber. To commemorate this victory, some Melbourne women burnt the balls and placed their ashes in the little urn which now rests permanently at Lord's. It was presented to Bligh, since The Ashes were judged to be recovered. Till then it was no more than a lark. The English captain, Ivo Bligh, was a handsome young man and the fashionable women of Melbourne were full of fun (he married one of them). Until Bligh's death the urn containing the Ashes stood on his study mantelpiece. After that it was handed over by his family to Lord's where it will remain probably forever.

If Australia win a series they do not take the urn containing 'The Ashes' back with them. The urn always remains at Lord's. The team winning

The series is said to have won The Ashes if the series ends in a draw, the side which had won the previous series is considered to have retained The Ashes. For instance, if the current 1985 series ends in a draw, then Australia will have retained The Ashes, as they had won the previous series at home in 1982-83, by 2-1. Incidentally, the 1985 Ashes series is being commercialised as it is being sponsored by the Cornhill Insurance Co. There will be prize money for each Test match and the winner of The Ashes.

The term 'Ashes' was popularised by cricket captains of both countries at the turn of the century till it became part of folklore. Finally England captain, P.F. Warner's book *How We Recovered The Ashes* after the 1903-4 tour, immortalised the term.

There have been several memorable series in the fight for The Ashes. In 1936, under the captaincy of Gubby Allen, England toured Australia and after winning the opening two Test matches, lost the series 2-3. So for the first and only time in cricket history, a side recovered from being two matches down to win a series. Again in the 1956 series, England's off-spinner Jim Laker took all 10 wickets in an innings and

12 wickets in the match at Old Trafford, Manchester—the only bowler in cricket history to have achieved this feat. Laker took 46 wickets in that series which England won 2-1. There have been several thrilling finishes also. In July 1902, at Old Trafford, Australia beat England by three runs, whereas in January 1983, England beat Australia by the identical margin of three runs in the Fourth Test at Adelaide. Australia's largest victory margins have been 5-1 in 1975-76 and 4-0 in 1958-59 at home and 4-0 in 1948 in England when the Aussie team led by the famous Don Bradman, was considered one of the best cricket teams of all time. England's largest victory margins have been 5-1 in 1978 and 4-1 in 1928 and 1932-33. All these triumphs were achieved in Australia. Till the commencement of the 1985 series, Australia have won 91 Test matches, England 83 and 73 matches between the arch-rivals have been drawn.

The West Indies may be the undoubted cricket champions of the world, but the fight for The Ashes between England and Australia, with its century-old tradition, will always remain a significant event in cricket history.

N.K.

AROUND THE TRACK IN 30 DAYS

Athletics

The 24th All-India Open Track and Field Championships concluded at the Chandrasekharan Nair Stadium in Trivandrum on May 5, with a thumping triumph for the Railways. They won both the team championships (men and women), collecting 16 golds, 11 silvers and five bronzes. The women performed better than the men, as compared to their previous performances. Significantly, the only two national records set were by the women athletes, and that too in the heats. P.T. Usha clocked **11.6 sec** for the 100 m sprint and M.D. Valsamma broke the 100 m hurdles record with a time of **13.9 sec**. The top athlete was, of course, P.T. Usha who bagged five golds—three individual titles and two relays.

Results:

Men: 100 m: Adille Sumariwala 10.8 sec; **200 m:** Anand Shetty 21.6 sec; **400 m:** Charanjit Singh Bajwa 48.2 sec; **800 m:** Rajinder Sharma 1:52.6; **1,500 m:** Bagicha Singh 3:49.1; **10,000 m:** Vinod Kumar Pokhriyal 29:56.4; **marathon:** Murlidhar Misra 2:27:02.0; **110 m hurdles:** Vijay Kumar 14.8 sec; **400 m hurdles:** Vasant Singh 53.2 sec; **3,000 m steeplechase:** S. Pachiah 8:53.8; **high jump:** Nelluswami Annavi 2 m; **pole vault:** Sunder Singh Tanwar 4.60 m; **shot put:** Balvinder Singh 17.85 m; **discus:** Ajmer Singh 55.04 m; **hammer:** Raghubir Singh 62.36 m; **javelin:** Nirmal Singh 72.44 m; **decathlon:** Sabir Ali 6,747 pts; **4X100 m relay:** Kerala 42.4 sec; **4X400 m relay:** Railways; **20 km walk:** Baldev Singh 1:40:24; **50 km walk:** Manipal Singh 5:01:59 sec.

Women: 100 m: P.T. Usha 11.8 sec; **200 m:** Shiny Abraham 24.4 sec; **400 m:** P.T. Usha 52.9 sec; **800 m:** Shiny 2:09.0; **1,500 m:** Suman, Rawat 4:36.2; **3,000 m:** Suman 10:02.4; **100 m hurdles:** M.D. Valsamma 14.4; **400 m hurdles:** P.T. Usha 56.8 sec; **high jump:** Elizabeth Mathai 1.62 m; **long**

RECORDS OF THE MONTH

Italy's Maurizio Da Milano set the best world performance in the 25 and 30 km walks on the track, at San Donato near Milan on May 5. Maurizio, an Olympic walk champion at Moscow in 1980, clocked **1:44:54** and **2:06:27** for the two distances respectively.

Both previous records were held by East Germany's Rolf Kowalky—**1:45:53** and **2:06:54**.

East Germany's Lutz Heselich established a new world record in the sprint event (last 200 m of the 1,000 m race are timed) by clocking **10.32 sec** at an international meet in Tblisi on May 7. He broke his own previous record of 10.44 sec.

jump: O.M. Rosilly; **shot put:** Bhaktarwar Khambatta 11.79 m; **discus:** Vijaymala Dutta 40.62 m; **javelin:** Razia Sheikh 45.14 m; **heptathlon:** Anees Verghese 4,615 pts; **4X100 m relay:** Railways 47.5 sec; **4X400 m relay:** Railways 3:46.2.

Football

The **Federation Cup** Tournament—India's premier club-level tournament—ended in Bangalore on May 19 with victory for East Bengal who defeated Mohun Bagan 1-0 in the final. East Bengal will be the first Indian club to play in the **Asian Cup** for champion clubs.

The **European Champions Cup** final—a knock-out tournament played between the league champion clubs of all European countries—was played at the Heysel stadium on May 29. The best teams in Europe, Liverpool F.C. of England and Juventus from the city of Turin in Italy made it to the final. What was expected to be a festival of football, turned out to be the 'Massacre of Brussels'. Before the match could kick off, trouble started in the stands as the Liverpool fans pelted the Italian

altercation increased, one of the walls collapsed due to the resulting stampede. There was absolute mayhem and in the rioting more than 40 people died, mostly Italians and more than 250 were injured.

The match was started much later. Juventus duly won by a solitary goal, courtesy a penalty kick by Michel Platini, who is the current European footballer of the year and also captain of France.

Hockey

Indian Airlines (IA) beat Pakistan International Airlines 4-1 in the final of the revived **Gold Cup** Tournament in Bombay on Apr 26. This was their third victory in the tournament.

IA was once again in the news when it won the **Beighton Cup** defeating Electrical and Mechanical Engineers (EME) Jalandhar, by a solitary second-half goal in the final in Calcutta on May 4. This was the fourth successive triumph for IA this year, after winning the **Muzaffarnagar Trophy** and Bangalore's **Clark Trophy** (both small tournaments) and, of course, the prestigious **Bombay Gold Cup**.

Incidentally, this is the **oldest hockey tournament in India**. First held in 1985, it is a Calcutta-based tournament. The original trophy, donated by one T.D. Beighton—Legal Remembrancer to the Government of Bengal—was stolen at Asansol, and replaced with a replica by the Asansol Recreation Club in 1920.

Tennis

Martina Navratilova (USA) continued in her winning ways as she won the \$1,50,000 Virginia Slims circuit tournament at Houston on May 5, defeating the young American Elise Burgin 6-4, 6-1. This was the 105th tournament win of her career and sixth this year.

At the \$2,00,000 Invitational Gunze Tournament in Tokyo, five times Wimbledon champion and now in retirement, Sweden's Bjorn Borg dished out some good tennis to beat compatriot Anders Jarryd 6-4, 6-3 in the final on May 12.

SANJEEV GUPTA

A Slip Of The Tongue

Rajendra K. Gaur of Bikaner was quick enough to spot a 'catch' in the **Sportspeech** column of our May issue. 'Long-off' should be read as 'long-on'. And 'long-off' is the off-side fielding position close to the boundary in the area between cover boundary and the straight point close to the boundary from the 'non-striking end's stumps'. It may also be termed deep mid-off.

Addenda to Masters Of The Game

Football

Asian Cup : Saudi Arabia 1984
(b China 2-0)
Asian Games : Iraq 1982
(b Kuwait 1-0)

Hockey

Some records

● Most Olympic titles have been earned by India—eight (1928 to 1956, i.e., six times in a row), then lost to Pakistan in 1960, beat Pakistan in 1964 and won again in 1980).

BANKING

VARIED INTERESTS

The Reserve Bank of India in a bid to inject a greater degree of efficiency into the Indian economy, decided to discontinue the prevalent system of adhering to a fixed set of interest rates for deposits of varying durations. According to an announcement in the first week of April this year, banks were given the freedom to pay an interest rate of their choice for short-term deposits (maturing over a period between 15 days and one year) subject to a ceiling of 8%. As expected, the new decision triggered off a new spirit of competition, jolting the lethargic banking system out of its slumber. Suddenly frenzied activity became the order of the day for banks, with each bank trying to lure more clients with enticing interest rates.

The Indian Bank's Association (IBA) which represents 95% of the nation's banking system including a few leading nationalised banks, in an attempt to frustrate the RBI move of injecting cut-throat competition, hastily conjured up an agreement aimed at restoring a uniform rate structure. According to this agreement, the rate of interest on deposits for 15 days to 45 days was fixed at 4%, for 46 days to 90 days at 5%, for 91 days to six months at 6%, for six months to nine months at 7%, and for nine months to one year at 8%.

It was then that international banks decided to cash in on the situation and decided to pay exorbitant interest rates to attract short-term deposits. Cause enough for the IBA to rescind its decision as fast as it had been announced. It too decided to follow in RBI's footsteps.

And then, just when it appeared that a true spirit of healthy competition had been inculcated in the country's banking system, the RBI, in a totally unexpected move, decided to withdraw its decisions bringing down the rates of interest to the levels prevailing prior to its April announcement. All this apparently because commercial banks had failed to take the scheme in its true perspective. Said the Governor of RBI, "It was hoped that individual banks would so fix the rates as to safeguard their current and savings accounts and simultaneously bring about better portfolio management. However, the approach of banks has been such as to prevent the emergence of efficient portfolio management."

The two controversial and dramatically opposing decisions taken by the RBI in quick succession are bound to jeopardise the efficiency of the banking system further as it is already running at extremely low profits. While the first decision inculcating competitiveness would have proved beneficial in the long run as it would have helped banks tone up their woefully inefficient customer services, the latter decision will once again cause them to revert to their original soporific existence characterised by a marked indifference to the interests of customers.

EC's RULING ON NRIs

CLOSING THE DOOR

In a bid to minimise interference of non-resident Indians (NRIs) in the internal affairs of the country, the Election Commission (EC) has rejected its demand for voting rights in Lok Sabha and Assembly elections as also its right to have representatives in these bodies. For it believes that granting of such rights would categorise them as ordinarily resident in their home constituencies in India — obviously a far-fetched idea!

The EC also turned down the plea that the NRIs, while being subjected to all Indian laws, did not have any lawmaker as their representative on grounds that since the Lok Sabha and the state Assembly elections were held directly from territorial constituencies, there was no provision for any functional representation. And under the existing law only those persons whose names are registered in the electoral rolls are entitled to vote in these elections. An essential pre-requisite of such registration is the ordinary residence of the voter in the Assembly constituency.

However, the President, the Vice-President, Governor, Cabinet ministers and their spouses, members of Assemblies and voters with service qualifications are exceptions to this rule under the Representation of Peoples Act. These categories of persons, by a legal fiction, were deemed to be ordinarily resident in the constituencies they would have been ordinarily resident of had it not been their holding such offices to remain away from their places in connection with the duties of the state in public interest. Included among the category of people with service qualifications are persons employed under the Union in posts outside India. These persons, although living abroad, are

tied as voters in their home constituencies and the postal ballot facility is also extended to them. And, as the report categorically states, "But the persons living abroad on their own volition and in their own private interest cannot be equated or treated at par with persons employed under the Government of India in Indian missions abroad." The EC has even gone to the extent of rejecting postal ballot facilities for such categories of persons as R.M.S employees, road transport workers and airlines staff although they were already registered as voters in the electoral rolls and consequently their demand carried more weight.

Apart from this, the postal ballot facility, if extended would be highly impractical, too. This is because at present a period of 20-25 days is normally allocated between the last date of withdrawal of candidature and the date fixed for counting of votes. And this period is insufficient for sending postal ballots to non-resident Indians in various parts of the world and receiving marked ballot papers before the time fixed, for counting of votes. Moreover, the implementation of such propositions would only generate discontent among people living in India particularly those living in different states and cities who would like to register themselves as voters in their native constituencies. This would also complicate the issue of appointment of diplomatic and consular officers as returning officers and electoral registration officers. The existing law envisages to have only one registration officer per constituency. And while it is possible to appoint diplomatic and consular officers as assistant electoral registration officers it would entail appointing each one of them as assistant registration officers for all the 4,000-odd Assembly constituencies in the country since people of different states and constituencies might be residing abroad.

The Election Commission's decision then should go a long way in curbing infiltration of NRIs having ulterior designs on their country of origin.

PUBLIC SECTOR OUTLAY

CARDS ON THE TABLE

The Planning Commission has approved a total public sector outlay of Rs 1,80,000 crores with the outlays for the Centre, states and Union territories fixed at Rs 95,734 crores, Rs 80,498 crores and Rs 3,768 crores respectively for the Seventh Plan. While this sets at rest certain uncertainties regarding plan size, it also envisages an estimated net resource gap of Rs 12,000 crores to Rs 15,800 crores at the 1984-85 prices. However, the size of the private sector outlay, initially estimated to be around Rs 1,40,000 crores, is yet to be finalised. Quite expectedly, owing to further decline in money value due to inflation the plan size in real terms is less than estimates made in June last year. On the other hand there has been a considerably narrowing down of the resource gap. For the latest study of the resource position of states by the Commission indicates that over the next five years additional resources of Rs 22,000 will be made available which is an increase of Rs 7,000 crores over the earlier estimate.

Most likely, the proposed consignment tax which has already gained the approval of the National Development Council, will make a significant contribution towards the enhancement of the states' resource position. As it is, a general widening of the tax base is expected during the Seventh Plan period.

Since the budget of 1985-86 envisages deficit financing of well over Rs 5,000 crores, for the remaining four years the scope for deficit planning would not be more than Rs 2,000 crores annually. Under such a situation it is imperative that a tight check be kept on inflation which should not be allowed to exceed beyond a single digit.

Meanwhile, the Centre will, during the Seventh Plan period, be giving the states assistance of around Rs 30,000 crores, that is, an average of Rs 6,000 crores annually. The plan allots topmost priority to the irrigation, transport and power sectors, a sum of Rs 16,000 crores has been allocated to irrigation and flood control while for power and railways the allocation has been stepped up by 75% and 85% respectively. However, there will be a substantial decrease in allocation for industry and minerals and the emphasis is likely to shift to modernisation and replacement of worn out machinery. And, hearteningly, the outlay for science and technology has been doubled while that for health and education increased by 100%.

The target of the Seventh Plan is a minimum of 4% annual growth in agriculture, a 7% industrial growth and an overall growth rate of 5.2% annually for the five years of the Plan period. The draft plan will, according to indications, be presented to the Planning Commission by July-end.

JYOTSNA SHARMA

BETTER ENGLISH

(Continued from page 58)

iron and is lighter. The development of the steam turbine and of the internal-combustion engine depends upon Bessemer's work.⁴

It will be seen that whereas paragraph A begins with a clear topic sentence and develops it with well-connected supporting sentences, in paragraph B there are at least two occasions (see the italicised sentences) when the author leaves the straight path and violates the principle of unity.

Unity is not the only quality that a good paragraph has. There are two more, *cohesion* and *coherence*. Cohesion refers to the way one sentence is grammatically related to another. It ensures a smooth transition. There are many devices for bringing about smooth transition. Coherence, on the other hand, ensures 'thought unity' or 'sense unity' in a given piece of text. In other words, it shows how various sentences in the text make sense together. It is not often that cohesion and coherence are properly distinguished. The crucial thing is to know that there can be (discourse) coherence in a text without there being (grammatical)

⁴ibid.

cohesion in it. Take the following example:

Question: Does the world face a famine threat?

Answer: Are you testing how pessimistic I am?

It is obvious that the two sentences (both in the form of questions) though not grammatically related, are perfectly meaningful. In other words they are discursively coherent without being grammatically cohesive.

One of the common ways of creating cohesion in a text is the use of certain fixed words and phrases denoting different kinds of relationships like addition, comparison, illustration, concession, etc. Some of the more important ones among them are

Addition: and, against, also, besides, finally, furthermore, moreover, next one, another, last, in addition

Time: first, second, etc, soon, before, after, finally, then, later, next, former, latter, afterward, at length, immediately, meanwhile, in the meantime, until

Place: here, there, beyond, nearly, opposite to, adjacent to, on the opposite side

Purpose: to this end, for this purpose, with this object

Comparison and contrast: however, but, yet, still, nonetheless, on the con-

trary, nevertheless, instead, on the one hand, in contrast, although, meanwhile

Examples: for example, for instance, to illustrate, the following example

Concession: although it is true that, granted, naturally, although you could say that, of course

Conclusion, summary and result: in summary, in conclusion, to conclude, to sum up, in brief, in sum, in short, as I have said, as stated before, in other words, to be sure, as a result, consequently, therefore, hence, thus, in fact, indeed

Once the one-topic-one-paragraph principle has been understood, the next thing to do is to learn about the ways in which a given topic can be developed into a paragraph. If we apply the analogy of the composition of a sentence, we can say that in a paragraph the topic sentence is the control unit and all other sentences are support units. However, these support units are literally meant to support, i.e., help develop the theme of the topic sentence. An analytical study of a large sample of paragraphs will reveal a finite number of typical ways in which paragraph development takes place.

(To be continued)

Answers to

TEST YOUR WORD POWER

- arduous:** C: difficult to do or achieve; laborious. In Hindu belief, Ganga came down to earth after King Bhagirath's arduous penance which lasted for several centuries.
- brahms:** D: aggressively self-assertive; impudent; cheeky; saucy; hasty; rash. Abdul Rahman Swareddehab, the new leader of Africa's largest nation, is neither an unknown quantity nor a brash young soldier, as some of his African counterparts were when they seized power.
- bully:** D: person who uses his power to frighten those who are weaker. In world trade, Japan plays the bully—stomping into foreign markets and usually dominating them.
- commemorate:** A: to honour the memory of; celebrate. Grand Trunk Road has recently been rechristened Sher Shah Suri Marg to commemorate the ruler who was responsible for laying it out in its present form.
- connote:** A: to suggest in addition to the fundamental meaning; imply. In most Indian languages the word guest connotes a special status; a person who must be honoured, respected, looked after; indeed, one whose wishes must be placed above one's own.
- culminate:** A: to come to a final result or effect; reach the highest point. In 1973, demonstrations in Gujarat spread to other states and culminated in the imposition of emergency rule by Mrs Gandhi in 1975.
- devout:** B: earnestly religious; pious. Every devout Hindu wishes to be cremated on the ghats in Varanasi, the holiest city in India.
- hoist:** A: to raise aloft, especially by some mechanical appliance. Forty years after their victory over Germany, aging veterans of the Soviet Union's struggle in World War II paraded past the Lenin Mausoleum in Red Square, their chests bedecked with medals, the flag that Soviet soldiers had hoisted over the ruins of Berlin in 1945 leading the way.
- lofty:** C: of great height. Situated in the Garhwal Himalayas where the lofty peaks rise up to the sky, Gangotri is the home of the daily Ganga.
- lure:** A: to tempt; attract; recall; entice. The abolition of estate duty might just lure a lot of non-resident Indians back to India.
- maverick:** B: a non-conformist; person who dissents from the ideas of an organised group. To much of the outside world, Romania is remembered as the East Bloc maverick that condemned the Soviet invasions of Czechoslovakia and Afghanistan and defied Moscow's call to boycott the Los Angeles Olympics.
- pest:** C: troublesome or destructive thing, animal, etc. Experts in bio-technology are working to amplify the effects of bacteria and fungi that destroy weeds and pests by natural means.
- primate:** B: highest order of mammals including monkey and man. The great apes, cousins to the homo sapiens, may be wiped out by the end of the century if protection is not given to them and the other primates, says the World Wildlife Fund.
- psyche:** B: spirit or mind; human soul; mentality. Vietnam was America's longest, most debilitating war, and its memory still haunts the national psyche.
- reminiscent:** C: suggestive of; recalling past experiences. The pattern of violence today is disturbingly reminiscent of the beginning of the Opposition's 1973 campaign against Indira Gandhi.
- resonate:** A: to produce an echo. Huck's (Huckleberry Finn) story resonates in America's heart because it is about freedom understood in an American way.
- rigid:** B: strict; harsh; inflexible; unbending. For the past five years, Chinese leader Deng Xiaoping has instituted sweeping economic reforms, moving away from rigid state controls and closer to the free market system.
- salute:** B: difficult to perceive or describe because fine or delicate; complex. Animals know instinctively how to display the patterns of colour on their bodies as signal flags communicating subtle messages to other creatures.
- sewage:** A: to pass through, over or across. So great is the volume of goods that traverse the Grand Trunk Road that large sections of the road have to be remodelled every six months.
- wares:** D: goods for sale; merchandise. Comdex, the huge trade show at which personal computer-makers display their wares to dealers, has always been a high-spirited affair overflowing with hype and hoopla worthy of a glamorous growth industry.

Vocabulary Ratings:

20-18 correct	exceptional
17-15 correct	excellent
14-12 correct	good

A CAREER IN TEA

Wanted: a top-flight, well-paying managerial job but away, away from the metropolitan scramble. For an outgoing, sociable young man who loves entertaining, the free country air and his evening round of tennis.

If that query is fed to an appropriately programmed computer, there is likely to be just one solution the screen will flash: tea gar-

den executive.

Prerequisite qualifications, you enquire. Engineering or agricultural degree, public school background. MBAs welcome, but management degree isn't really a must, the computer would add, as an after thought.

Computers of course are faceless, cryptic question boxes, monosyl-

labic if they can help it. So we went to an old tea hand, a tea garden manager for many years who is now posted in the Calcutta head office of his firm, to find out more about tea industry jobs and life in the gardens. Over to him: "It depends on one's temperament of course, but I wonder if I would ever have had so much of life if I wasn't in tea. Job satisfaction, yes, that's it. You are up six in the



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morning, you put in a good day's work (without having to worry about traffic jams on way to office and back), you have your lunch and the afternoon lie-back at home, and you are either entertaining or calling on neighbours in the evening. And in the weekends of course you drive with the family to the club—for sports, the get-to-gethers, the dances, the jam sessions, the library and of course the evening film show. It is a fast-paced life, but in idyllic, sylvan surroundings."

But how well does tea really pay? It depends on the firm, of course; the average starting emoluments range from Rs. 1,500-2,000. But that's just half the story. For, the perks are fabulous. Furnished accommodation—no two-bedroom hole perched in the 12th floor of a highrise, but vast bungalows manned by an army of servants whose wages the company takes care of. The company also sees to your medical expenses, children's education in expensive boarding schools, club subscriptions and what have you. You could also apply for loans for buying your car, and of course the company foots your fuel bill.

Normally, the first post in the gardens is that of assistant manager. Most gardens have two assistant managers, one in charge of the factory and the other to supervise work in the field. The ideal qualification for asst. manager (field) is a degree in agriculture, but you could be selected even if agriculture is Greek to you. What most firms actually look for is good upbringing, quick thinking ability and, most important, leadership quality. The tea garden labour, mostly adivasi emigrants

from south Bihar or Nepalia, looks to the managers for guidance and leadership, and it is the managers' responsibility to look to their well being as well as get work out of them.

"You could be woken up at midnight to settle a quarrel between a labourer and his wife," said one tea-estate manager. "You are expected to be just, fair as well as strict. You are their *mai-baap*. And woe betide you if you don't have the personality." He recalled an anecdote from his early life in the gardens, in the 50s when he was an assistant manager in the Dooars. "While I was on my rounds one day I found that work had stopped round some bushes. The labourers had huddled together and seemed to be tense. On enquiry they told me there was a snake hiding in the bushes. At that moment the manager, a burly Scotsman, turned up. "You know what you have to do?" he asked. I said I didn't. "They expect you to kill the snake," he said. I was scared to death, but mustering all my courage I picked up a stick and went for the snake. I had to kill the snake; there was no way out."

T. Barooah, Director-General, Indian Tea Association, perhaps put it best when he said: "Tea is perhaps the only industry where managers virtually live with the labour." And the result of the experience is a unique capacity to understand labour, which could be of much value if you wish to shift to another line after some years in the tea gardens. Shifting to other lines is no problem at all if you have the normal professional qualifications like MBA or an IIT degree. But even if you aren't so well quali-

fied, as an ex-tea planter you will always be considered good 'officer material', with much the same prospects as an ex-service man. But chances are you would never wish to leave tea. As the saying goes in the industry, "Once in tea, always in tea."

But what's your career graph going to be like if you choose to adhere to that saying. Well, though there are not too many promotions in the industry, the increments are big. Assistant managers become full managers after about 10 years, though some firms have intervening positions like Deputy Manager. If it's as a manager you retire, you could be drawing well over one lac rupees a year. But it is possible you could be promoted to the post of Senior Manager or Superintendent if you happen to be employed in big firms. Officers holding these designations oversee a group of gardens.

You could also be transferred to the head office at Calcutta on a senior executive marketing post. Normally, such transfers are more likely when you are still assistant manager. Full Managers of course are valuable trained material, and following a long tenure in the gardens, firms sometimes do bring them over to Calcutta with promotion to the coveted post of Visiting Agent or Advisor. Visiting Agents oversee even larger groups of estates than Senior Managers or Superintendents, being usually based in Calcutta. And of course there have been instances of tea estate Assistant Managers reaching the very top in his firm. One such success story is of S.K. Mehera who retired recently as President of Tata Tea (formerly Tata-Finlay) Ltd.

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One reason why tea is such a challenging career today is because the industry is poised for tremendous growth. India is the largest tea drinking nation in the world, and consumption is increasing every day. But even after meeting this huge domestic demand, the industry earns 7-8% of the nation's foreign exchange earnings through export. Last year tea netted Rs. 744 crore from sales abroad, the highest by any single commodity. As T. Borooah commented: "A sense of buoyancy now pervades the industry, after two years of prosperity." Much of the recent profits are likely to be ploughed back into the gardens to improve crop quality, extend plantation areas, better drainage and irrigation facilities and also install new and more modern machinery in garden factories. With so much development in the offing, the young recruit should find real challenge in his work.

Traditionally tea has attracted the best talent in the country. Indeed, till about a decade ago, it was a very closed circle from which young garden managers were selected, usually on recommendation. As one tea executive said: "Appointment ads in papers, no, that was never done." Now of course that exclusivity has virtually disappeared and advertisements for openings do appear in appointment pages. So keep a lookout and rush your application as soon as you see one. The competition, we can assure you, is going to be tough.

The gardens, as you obviously know, are mostly located in Assam and north Bengal. There are also gardens in the south on the Nilgiri

slopes, and after Calcutta, Cochin is the biggest auction centre. Auctions are also held in Amritsar, Gauhati and Siliguri besides London, Colombo, Mombasa (Kenya) and Chittagong, but the one at Calcutta is by far the largest. In the auctions, a wide spectrum of buyers from home and abroad come to bid for tea brought from gardens around the country. Since tea estates are spread over vast and often remote areas, it is difficult for gardens, particularly the smaller ones, to expose their teas to a large number of buyers. The auctions help here by allowing the tea to be seen by the maximum number of buyers, thus generating competition and ensuring that it is sold at the best prevailing price. There is perhaps no other industry in the world where the producer is able to dispatch his product and leave the entire process of marketing to an organization hundreds of miles away. The auctioneers are a rare breed of executives: the tea tasters (see following story) Tea tasters form the core of tea professionals in Calcutta and other auctioning centres.

But to return to the gardens, how really is tea grown? The story begins in a plot reserved for selected tea trees from where the seeds are acquired. The trees there are allowed to grow to their full size and blossom. The seeds are collected and planted in a nursery. The seeds germinate soon, and within about a year the young plants are ready to be transplanted in the field—their permanent home. Four years later, when the plant attains a height of about 2 metres, it is pruned. Much care is taken during this period of growth with regular manuring and the applica-

tion of insecticides. Attention is also paid to the drainage in the gardens, as nothing is more disastrous to tea shrubs than stagnant water. The tea leaves are plucked from March through November. The shrubs of course are never allowed to grow beyond 2 metres.

After the leaves are plucked they are taken to the factories for processing; there is a factory in most gardens. The leaves are first 'withered', that is, rid of excessive moisture, sometimes by application of hot air. The leaves are then 'rolled' to impart them the characteristic twist and to break the leaf cells so that its juices are exposed for fermentation to set in. During fermentation, the tannin in tea is partly oxidised and the leaf changes colour and turns into a bright coppery-red. The final operation is 'drying' or 'firing'. The drying machine is the largest machine in the tea estate factory; the essential function of this process is to arrest further oxidation of the leaf and to remove almost all moisture. The tea coming out of the drier is sent through sieves with graduated mesh, so that the final packages are of uniform-sized leaves.

They are then graded and packed in plywood chests with linings of aluminium foil and paper, and ready for their adventurous journey to all corners of the globe. The process outlined above is generally known as the 'orthodox' method; a second important variation is that in which the CTC (Crushing, tearing and curling) machine is used. Here the roller is dispensed with and, by the use of the machine, the manufacturing time is greatly reduced.

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CTC of course is a relatively recent introduction; it has been the orthodox process that planters have followed since the 1830s when the industry in India dug its first tentative roots. Tea of course was known to Europeans since the 17th century and to the Chinese and Japanese for centuries. Ramusio, a noted Venetian traveller, first brought the beverage to the notice of Europe in 1559 after travels to the Far East where it was already widely cultivated then. By 1600 the Dutch had begun shipping tea to the continent, but England, eventually to emerge as the largest consumer of the beverage, remained strangely casual to it in those years. The British royalty however took the lead in taking to tea though it was only in the late 1780s that the beverage, according to Northcote Parkinson, 'descended from the palace to the cottage.' The foundation and growth of the tea industry in India is one of the great romances of the 19th century. Until about 1830, all the world's tea came from China and tea drinking was essentially identified with that country. Botanically known as

"Camellia", the plant was first identified in India in 1823 as wild growth in parts of Assam by Major Robert Bruce, an agent of the East India Company. It however took a lot of persuasion and assurances of concessions before British capitalists ventured to invest in the Assam gardens.

But the quick success in Assam lured many other to take up this lucrative business and a tea committee was formed in 1834. Seen in retrospect tea is one of the earliest industries developed by British business houses in India. Britishers were largely involved in the industry till as late as the 1970s and no wonder tea circles are still so *pukka*.

So, this is it. Tea is an industry that is thriving, poised for accelerated growth, an industry that has so much history behind it, that has been built up by men of great enterprise and courage and that is India's pride today. Not only is India the world's largest tea producer, it is also here that the best tea is grown—the delectable Dar-

jeeling. If you join tea, you will be part of a great tradition and a part of the dynamic new India. Give it a try. You will never regret it!

TEA TASTERS : THE PROFESSION OUTSIDE THE GARDENS

What if you are interested enough in tea but unwilling to work in far away gardens. The computer sure has an answer to that sort of problem. Become a tea taster, it advises. Interested? Read on to learn more about this remarkable profession.

A look at the dry leaves, in square aluminium containers, a sniff of the aroma, then a sip of the liquor in fine china cups, rolling it in mouth for, say 15 seconds, and spitting it out. "Knobbly, fairly brisk, 23", the hastily noted verdict. Seven hundred such exercises perhaps over the day, plus seeing to the management, sales and market condition for the company as well as auctioneering—it is several jobs rolled into one. But then, tea tasting is a unique profession, with



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less than 500 people all over the world in it. Calcutta, the world's tea capital, has over 150 tea tasters employed in the several broking and export firms. There are tasters employed in the several broking and export firms. There are tasters too in London, one time nucleus of the world tea trade; in Colombo, Kenya and in the Indian centres of Gauhati, Siliguri, Cochin and the Nilgiri town of Coonoor.

Small though their number, the tasters are indispensable to the tea industry. Every senior executive in tea *broking* firms is an accomplished taster, so vital is tasting. Indeed, one oft quoted definition describes tea brokers as those trained in the art of "feeling seeing smelling and valuing" tea. Essentially, of course, tea brokers, like all brokers, are the middlemen And exceptionally reliable middlemen. Planters in Assam, Cachar and Darjeeling, the Dooars and Terai in north Bengal, after processing and packing the tea in wooden chests, ship the produce to Calcutta (Cochin if it is Nilgiri tea) and then, wash their hands off it. Marketing is the business of brokers.

The brokers take over as soon as the chests arrive in Calcutta. Samples of leaves are taken from selected chests from each garden, before they are sent to the warehouses, and these samples are distributed among the buyers.

Meanwhile the tasters in the broking firms value the samples, and some buyers, who employ tasters too, make their independent valuations. Agents of foreign buyers correspond with importers, enquiring about market conditions in the

respective countries and reporting to them the sample valuations. By the end of the week all consultations are completed and the buyers ready for the coming week's auction.

The Nilhat House Auctions in Calcutta are the largest in the world. Some 3 million kgs of tea come under the hammer here every week, and about 50 per cent is sold to foreign buyers. Auctions have been held in the same premises since 1861 (the first recorded public tea auction was in London in January 1839); the auctioners are mostly executives of a Calcutta based company, acting for the Calcutta Tea Traders Association.

Bidding is started at the price recommended by the broking firm's tasters. The bids come in fast especially if demand is high. The costliest teas are the Darjeelings, with prices reaching about Rs. 400 per kg. The United Kingdom remains even today the largest buyer of tea, though British imports have declined over the years. Russia and the Gulf countries, the US, Australia, Canada and some West European nations are other major buyers of Indian tea. Top quality tea is lapped up by the West Asian oil countries and West Germany, and also Japan. The British penchant for choice tea has much mellowed over the years. Indeed were it not for the Germans and the Arabs, and of course the Russians who ship out most of the not-so-good-but-still-expensive Darjeelings, the legendary mountain plantations would long have been dead.

Acquiring professional "tea connoisseurship" requires years of tast-

ing. "You taste and taste and taste before your palate learns to distinguish those subtle differences," explained one tea taster. For the first few years, the freshers simply sip liquor tasted by senior professionals and check on their valuations. It takes years before the initiate can confidently pronounce on tea quality. If the demand on the palate is so exacting, how are fresh tasters recruited? Tea tasters admit there is no foolproof selection test though what are checked for are the abilities for quick thinking, discrimination and analytical reasoning abilities—abilities demanded in any management career. For tea tasters, after all, are essentially management executives; there are several MBAs today in the profession.

Which raises the question: why do tea tasters have to concern themselves with management and sales? Tasting and valuing should be enough of a job by itself. "It's always been that way", explain tea executives in reply. "The first planters were the first tea tasters." Tea tasters, in other words, have always been traders first, and tasters second. Tasting is an aid to selling and since tea can be valued from only a precise knowledge of the market demand and the prevailing prices, marketing and tasting can't be two separate compartmentalized jobs.

Some tasters don't just value tea, they advise gardens too on bettering quality. Indeed, some of the larger plantations employ in-garden tasters. Processing defects, transshipment faults, every minor detail that can lower tea quality is considered. Tea leaves are very absorbent and it is important that the

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wooden chests for transshipment are built of properly seasoned panels. Otherwise the leaves pick up what tasters describe a 'chesty' taint. If the glue used in the chests is inferior, the leaves will have 'cheesy' taste.

Tasters indeed must have encyclopaedic memories, for the variety of taints and flavours is vast, and valuation must sometimes be made considering such factors as the garden's crop quality history and the shelf life of the packaged tea—exported tea is consumed after weeks of shipment.

A taster collects much of the initial clues of leaf quality from seeing, feeling and sniffing the sample tea, placed in aluminium containers on the tasting room tables. Long rows of the containers with corresponding liquors in cups line the tables, and a taster works his way down the rows, valuing each sample in less than half a minute.

An assistant, keeping pace, notes down the valuations. "Knobbly, fairly brisk, 23." 'Knobbly' is tea jargon for the look of the leaf, 'brisk' signifies a particularly good quality taste, 23 is the valued price in rupees per kg.

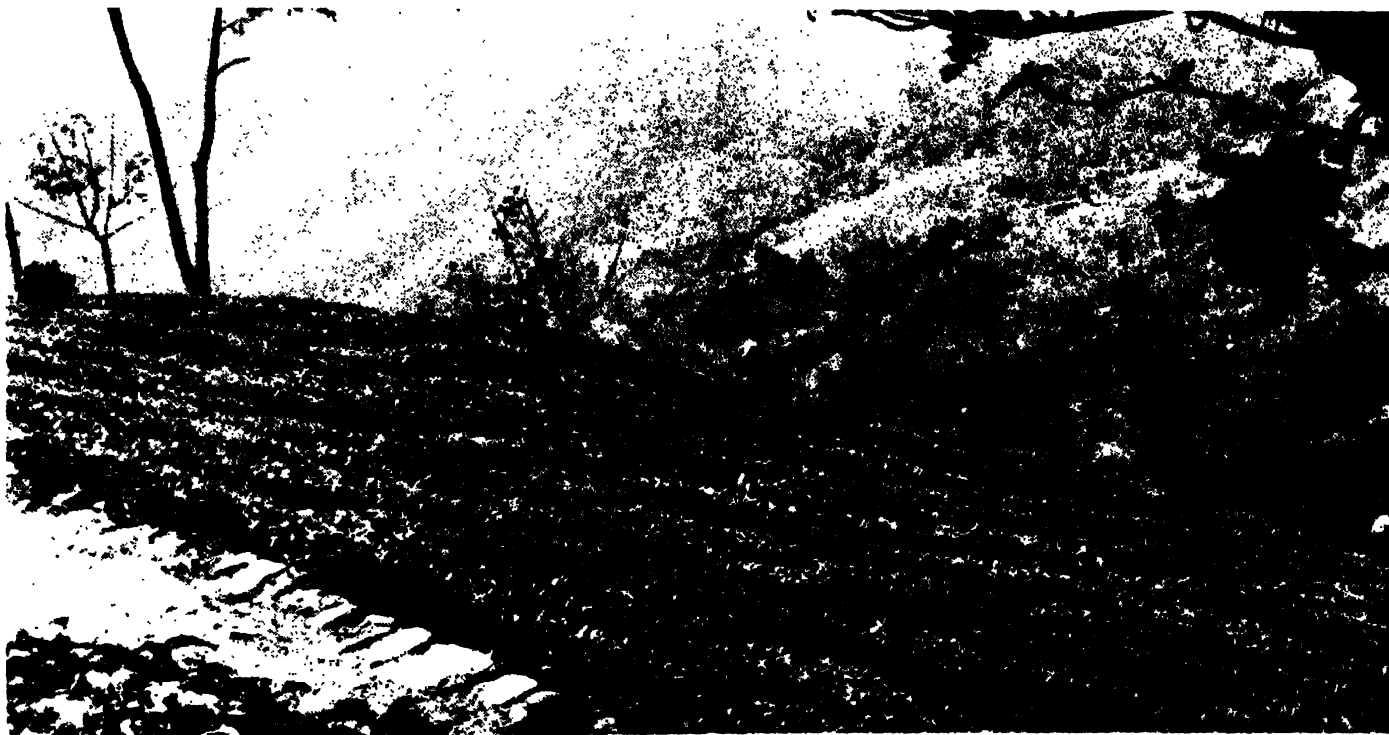
The tasting liquor is usually brewed from 2.5 gms of the sample leaves in just boiling water. Infusion time is 6.8 mts, and the liquor is ready for tasting. Sometimes milk is also added.

Tea tasters possess the most sensitive palates, trained for years to register the faintest taints, but they still might err. But, in an age of sophisticated technology, should not a more reliable, more scientific valuing procedure be adopted—chemical analysis, for instance? Industry experts think not. Chemical analysis, they confess, can be a substitute, but only to a certain extent. The final tasting must always have to be left to the human

palate. "You can't taste in test tubes", sums up one broker. "The taster is indispensable."

The tasters' salary packets are no different from other managerial wages. And their life styles are no different either from that of most Calcutta executives—office-club-home, interspersed with a lot of parties. Tea tasters, unlike tea garden managers, have no special clubs—they are usually members of the top Calcutta clubs.

Care to count yourself in this exclusive tribe of professionals? The openings aren't too many, but keep an eye on the appointment page and get in touch, if possible, with major tea broking firms for vacancies are often not advertised. You will most likely be first taken as a management trainee. If you are an MBA, you stand a better chance of selection. Best of Luck!



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ESSAYS

INDIA AND HER NEIGHBOURS

International relations involve conflicts between neighbouring countries and cooperation among others. The European Economic Community (EEC) is the best example of cooperation among the West European countries, whereas the ongoing war between Iraq and Iran illustrates the existing conflict between neighbouring countries. The major countries of South Asia are involved both in conflict and cooperation with each other and an effort is required to eliminate the areas of conflict and extend the areas of cooperation.

The South Asian countries had a unique history of having suffered under colonial rule. It was expected that after freedom, these countries would cooperate among themselves to safeguard their freedoms from outside powers. Unfortunately this did not happen. There are numerous reasons responsible for this.

India, after independence, adopted parliamentary democracy and successfully established a secular state. As part of her foreign policy, India followed the path of non-alignment hoping that conflicts with neighbours could be resolved on the basis of negotiations and peaceful co-existence.

Indo-Pak Relations

The basic premise of India's relations with her neighbours was, however, questioned by Pakistan who joined the Western military bloc countries, leading to a cold war and an arms race in the region. Since the '50s, India has been compelled to respond to Pakistan's policy of joining the Western military bloc resulting in serious conflict between the two countries. The conflict has become basic because the two countries have fundamentally different perspectives on their relations with the Western military bloc. The logic of Pakistan joining the bloc culminated in the Indo-Pak war in 1965, followed by the Tashkent Agreement. The agreement, however, was a shortlived one because East Pakistan challenged the hegemony of West Pakistan and India got involved in Pakistan's domestic conflict. Pakistan resorted to armed conflict for the resolution of its domestic regional problem and attacked India. The Indo-Pak war of 1971 ended in Pakistan's dismemberment and signing of the Simla Agreement.

The basic thrust of the Simla Agreement was that bilateral problems between India and Pakistan could be resolved through dialogues, discussions and negotiations. It recognised bilateralism

and expected all means to be resolved and areas of cooperation strengthened. However, Pakistan's old policy of arms race got re-started.

A non-aligned India, during the last 30 years, has now been compelled to come to terms with the militarily-aligned Pakistan. Consequently a powerful anti-India lobby has developed in Pakistan which is determined to manufacture nuclear bombs. This is likely to bring about a qualitative deterioration in the strategic environment of South Asia. The present efforts towards normalisation of relations between India and Pakistan should continue but normal relations between these two countries cannot emerge unless Pakistan abandons its military and nuclear postures. The only basis for mutual relations of goodwill between India and Pakistan is acceptance of bilateralism which the military rulers of Pakistan refuse to accept. Relations among nations cannot be based on sentiments; they have to be based on recognition of concrete realities and, unfortunately, Pakistan refuses to accept that any large-scale induction of arms by Pakistan with the support of the US will lead to deterioration of relations between India and Pakistan.

Indo-Sri Lanka

India and Sri Lanka are non-aligned countries and they have a common perspective in international and regional affairs. But recent developments in Sri Lanka have sadly strained India's relations with this country. The ethnic conflict in Sri Lanka is escalating and the Sri Lankan Government is inviting outside forces to interfere in its internal affairs. Sri Lanka has allowed *Voice Of America* (VOA) to operate from its soil and the records of VOA in all regions has been full of conflicts.

Indo-Bangla Ties

India and Bangladesh started their journey of friendship after the emergence of Bangladesh in 1971. Two important irritants have developed between India and Bangladesh, i.e., sharing of water and fencing of the border to stop the influx of refugees into Assam from Bangladesh. Negotiations between these two countries are continuing in order to resolve bilateral problems.

During the last 38 years India has consistently supported Nepal and has also extended project aid and trade concessions to Nepal.

Except for Pakistan, India's other neighbours have bilateral ties with India. Because Pakistan has opted for a military solution, relations between India and Pakistan continue to be unfriendly—rather hostile.

To further cement friendship among the South Asian countries, an institutional basis is being created and India, Pakistan,

Sri Lanka, Bangladesh, Nepal and Maldives are forging links of cooperation under the framework of South Asian Regional Cooperation (SARC). The SARC is a step forward and it is hoped that economic, cultural and technical cooperation among the member countries would help in removing the present irritants.

C.P. BHAMBHRI

MULTINATIONAL CORPORATIONS AND THE THIRD WORLD

The tragedy in Bhopal caused by the leakage of a toxic gas has once again unleashed all the passions inherent in the debate about Multinational Corporations (MNCs) "exploiting" the Third World countries. Methyl isocyanate (MIC), a chemical, used by the Union Carbide pesticide factory as an ingredient in producing highly toxic pesticide, leaked killing thousands of people and affecting an even larger number physically and emotionally. This industrial mishap is one of the major accidents of the year 1984. In Taiwan and Mexico similar gas leakages had claimed about 800 lives, but the Bhopal accident has caused such large-scale misery that a careful analysis of the role of MNCs in the developing countries becomes imperative.

World War II and the oil crisis in 1973 were important breakthroughs for the growth of multinationals. "A multinational corporation owns and manages business in two or more countries. It is an agency of direct, as opposed to portfolio, investment in foreign countries, holding and managing the underlying physical assets rather than securities based upon those assets." Today the MNCs are multiplying rapidly in countries like Brazil, Mexico, Argentina and India—countries rapidly climbing up the ladder of industrialisation. The advantages the MNCs offer to the developing countries are numerous. They provide employment to vast numbers and introduce a wide variety of products in these countries. More important they bring modern technology and help greatly in the industrial activities in such countries. Through their training programmes they help in building up an efficient managerial and supervisory cadre, so essential for promoting the growth of science and technology.

However, the working of these giants has not fulfilled the hopes regarding employment, training, transfer of technology and industrial activity as such. The transfer of "modern" technology remains more of a myth than a reality, with obsolete and unsafe procedures being coolly rubbed off on these unsuspecting nations. Of course the connivance of corrupt politicians and bureaucrats allows these giants much leverage in getting

away with many things. The case of baby foods and drugs will substantiate this point. The advertisements of baby food on television are prohibited in some of the rich countries as it has been conclusively proved that breastfeeding is best for babies. But the same manufacturers adopt aggressive sales promotion campaigns with attractive slogans and ads and try to push through their products. The local authorities of course join hands with these MNCs and promote such campaigns. But what is appalling is the philosophy of these MNCs—what is harmful for babies in the developed countries is good for the young ones in the Third World countries. In the pharmaceutical industry "drugs" banned in the rich nations are freely marketed in the developing countries.

Till the Bhopal disaster everyone feared a nuclear holocaust but now the confidence in civilian technology is also badly shaken. The gas leak in the Union Carbide factory highlights the callous attitude of the MNCs in maintaining safety regulations in the Third World, where such regulations are definitely lax. The use of MIC in producing pesticides and its storage in large quantities in the factory at Bhopal is curious. In a sister plant in the US only a very small quantity of this chemical is stored. This discrimination assumes serious proportions considering the inadequate safety equipment at the pesticide factory of Union Carbide in India. No doubt laxity in the Indian attitude contributed greatly but still Union Carbide cannot get away from being responsible for the disaster in Bhopal.

The Union Carbide cannot be blamed entirely for the sad episode. The government must also own up its mistake in allowing a hazardous chemical factory to be set up amidst vast populace. As compared to this, in the US and other rich countries such dangerous plants are located on the outskirts of the city, away from people. Definitely the government's attitude has spelt misery for a large number of people. But the MNCs must also clearly warn the residents about the adverse consequences of their operation. In the Union Carbide case the parent company could have easily asked the Bhopal plant to be shut down till adequate safety equipment was installed. This could have saved thousands from life long suffering.

The Bhopal leakage has another dimension, i.e., the negligence and the indiscipline in the country. If everyone had been vigilant the accident would not have occurred.

Another important facet of this major industrial accident is the ignorance of the doctors and technical personnel to take care of such emergencies. The MNCs and the governments of the Third World must build up adequate medical facilities par-

ticularly in areas where such plants are located.

The lessons for the Third World are many. Most important is that chemical and other hazardous plants must be made safer. The location should be far away from population. The government machinery should be tightened and implementation of the existing laws, must be ensured; frequent surprise checks by factory inspectors could keep these industries on their toes.

J.V. ARUN KUMAR

PLANNING IN INDIA

It has been over three decades since India set out on the path of planned economic development. Although the growth rates over the years have been uneven, all the six Five-Year Plans, beginning with the First Five-Year Plan in 1951, have aimed at providing new opportunities to the people for improving their living standards. There is no doubt that planning has dominated all spheres of our economic endeavour.

Various objectives have been outlined in the six Five-Year Plans; a few of them figure prominently in all the Plans. These are: to secure a faster growth of national income; equitable distribution of income and wealth; to increase investment in order to expand the capital; and to provide employment to the growing population. Apart from these, price stability, self-reliance, import substitution and export promotion have been some of the other important objectives of our Plans.

A proper assessment of the planning process entails a careful study of the strengths and weaknesses of the Indian economy. On the positive side, the commendable achievement in the field of agriculture and industry, alongwith the increase in capital formation, can be attributed to the success of our planning process. The acquisition of scientific know-how and development of technological skills have helped in reshaping a colonial economy into a modern one. The new agricultural strategy which includes High Yielding Variety (HYV) seeds, fertilizers and improved irrigation facilities, has transformed the agricultural sector. The introduction of numerous and variegated industries, which have come up since 1951, is very impressive. The social gains in the last three decades, have also been considerable. The increase in literacy rates and the improvement in health facilities have contributed immensely towards changing the lives of the people.

Following these impressive achievements of the Five-Year Plans, are a long list of failures. It is unfortunate that despite all efforts, the Gross National Product (GNP) has remained obstinately around

the 3% mark. With a rapidly multiplying population, this has resulted in low per capita income. Another serious limitation of our Plans has been the gross under-utilisation of scarce capital, indicating rising capital-output ratios. The large capacities created in the Plans have not been fully utilised. This has resulted in wastage of precious resources. The increasing rate of unemployment is another concern of our planners. They put the blame on the increasing population in the face of low output. As regards the redistributive objective, success has been partial in the sense that in relative terms, a large number of people are still below the poverty line.

The Sixth Five-Year Plan (1980-85), seems to be the turning point of our planning process. During the 80's, India has been one of the few countries to maintain a fast tempo of development despite a hostile international environment. For the first time since 1951, we have crossed the 5% barrier in growth rate during the Sixth Plan. More importantly, the nature of control exercised by the government, on the private sector has also changed during this period. The adverse consequences of the quota system, the licensing system and the bureaucratic procedures, have been realised and efforts are on to make the system efficient by directly attacking corruption and black money, simultaneously, and liberalising restrictions. This approach has succeeded in making our private sector strong, with a capacity to invest in projects with long-gestation periods. As a result the task of the public sector today is reduced to regulatory functioning rather than direct promotional investment.

The stress on manpower planning since the beginning of the Sixth Plan, is a welcome break from the past. This has brought about improvement in managerial ability in our production units. The tremendous expansion of infrastructural facilities in the 80's has boosted production and helped in smoothening the scarcities in the market. The Seventh Plan has made it clear that the planners intend to break the stronghold of oligopoly in the market. Competition is to be extended to all sectors of the economy to promote technological progress and to reduce costs. It has now been realised that the MRTP Act and the licensing procedures need to be changed. A new thrust is being given to the poverty alleviation programme in the Seventh Plan, e.g., the Integrated Rural Development Programme (IRDP). When the loopholes at the implementation level are plugged, the programme is to help over 50m families. With this new positive approach, there is little doubt that India will prosper in the coming decades.

J.V.A.K.

GROWING POLLUTION IN INDIA



The term pollution technically means the excessive addition of undesirable substances to the ecosystem, affecting it adversely. These substances consist not only of obnoxious gases or smoke as we commonly believe, but also industrial effluents and noise which pollutes sound. It is the excessive use of these substances rather than their physical and chemical properties which is of significance. The pace of ecological pollution has accelerated due to modern human activity which has magnified man's capacity to influence his environment.

The modern transportation systems are largely responsible for environmental pollution. The fantastic increase in the number of vehicles has made road traffic a major source of pollution. A car's exhaust spews out numerous pollutants like sulphur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), unburnt petroleum products and its derivatives like polycyclic aromatic hydrocarbons (PAH). These cause respiratory diseases, reduction of oxygen carrying capacity of the blood and cancer. The fluorocarbons from jet exhausts have the capacity to destroy the ozone layer in the earth's atmosphere, thus exposing its inhabitants to hazardous ultra violet rays.

Innards of hell: A common sight of pollution at its worst.

The industries add to the pollution of air, water and land. Depending upon the kind of industry, the types of pollutants are as follows.

Chemical industry—various obnoxious gases

Metal industry—metal dust

Textile mills—cotton dust

Paper mills—fly ash

The pollutants have made the environment of industrial (urban) areas more hazardous than that of the poverty ridden rural areas.

Agro-technology has, on the one hand, provided food for the ever-increasing population and on the other, exposed us to slow and gradual death, because the excessive use of fertilisers, insecticides, nitrate and phosphate fertilisers affect the metabolic chain of human life.

The forms of energy have also proved to be potent pollutants. A hot water stream from a factory joining a flowing river adversely affects the ecosystem of that place. Urbanites are subjected to sound pollution—the noise produced by traffic and industries represents a diversity of pitches which our auditory system is not

conditioned to. The same is true for glaring artificial lights which strain the eyes.

The discoverer of radioactivity could never have imagined that his discovery would expose humans to yet another type of pollutant. The atomic reactors, X-rays and other radiations may have serious side-effects if used injudiciously. Human beings have added many more new pollutants than they have tried to remove. The new menace of used empty cans and bottles is becoming a real problem and has been termed 'Third Pollution'.

The environmentalists have often been accused of being anti-developmental. Apparently, they oppose industrialisation and modernisation in the name of environment. This is because of people's misconception and ignorance of both industrialisation and environment. A balance has to be struck between environmental protection and industrialisation. Both aim for the welfare of mankind and are complimentary to each other.

The use of tall chimneys, electrophoretic filters, better exhaust and engines, pretreatment of chemicals and afforestation are a must for the preservation of a pure and clean environment. It is the amalgamated progress of science, technical know-how, industry and environment which can make this earth a better place to live in.

FOR WANT OF PROTEINS

All organisms are made up of cells. Proteins form a major constituent of cells. They are made up of basic blocks—the amino acids. These blocks

The young die old: An emaciated child as a typical case of severe malnutrition.



are connected to each other by specific linkages called peptide bonds.

Our body needs proteins for body-building and repair. It is seen that a child doubles his birth weight in the first six months of his life and triples it during his first year. For this rapid growth he needs proteins. In the first few months the baby gets proteins from his mother's milk and later through various foods rich in proteins.

An adult no longer needs protein for growth. In the adult body, however, different cells and tissues are constantly being subjected to wear and tear. For example the RBCs get destroyed after about 100-120 days and new cells are consequently formed. Proteins are essential for the formation of these new cells.

The following table gives the protein needs for various individuals:

1. Healthy adults need proteins for repair of worn out tissues.
2. Pregnant mothers need proteins for repair of tissues and healthy pre-natal development of the baby.
3. Children need proteins for growth and repair.
4. Adult patients need extra proteins to cope with the effects of their illness.
5. Young patients need extra proteins for growth, repair and recuperation.

Unlike carbohydrates and fats the body does not store proteins. This makes it essential to include proteins in a well-balanced diet.

Protein deficiency diseases in children
Kwashiorkar: Common in Africa and other developing countries. Incidence is mainly seen in children upto the age of two years. Its causes are protein deficiency in the diet and excessive carbohydrate intake. Symptoms: oedema, hair changes, under-weight, moon face, thin muscles.

Nutritional Marasmus: Earlier termed as decomposition, it is characterised by a severe wasting of muscles. Symptoms: under-weight, old man's face, thin muscles, marked atrophy of organs and tissues. The infant is irritable and perpetually hungry.

Intermediate severe protein caloric malnutrition: An in-between form of the first two diseases.

Mild moderate protein caloric malnutrition: Mild type of kwashiorkar, which is much more prevalent than kwashiorkar.

Protein deficiency diseases in adults

Liver necrosis: Breaking up of liver cells.

Less rapid wound healing.

Fall in plasma albumin.

Famine oedema: The disease has symptoms similar to beri beri. Serum albumin is greatly reduced. It is also known as adult kwashiorkar.

Therapy

Life-saving measures: To control the severe water and electrolytic disturbance, a mixture of lemon juice, calcium car-

bonate (CaCO_3) and sugar is given to the patient.

Specific nutrition therapy Skimmed milk, fat, sucrose, banana and fish are preferentially given to the patient.

Prevention of protein malnutrition: Administration of special weaning foods, soyabean foods and cultivation of better eating habits.

Plant Sources	Protein Content
Soyabean	34%
Groundnut	23%
Beans	20%
Animal Sources	Protein content
Dried fish	63%
Fresh fish	18%
Meat	18%
Egg	12%
Cow's milk	3.5%

Use of soyabean as a rich source of protein is increasing today. The US is its largest producer. Glycine Max (soyabean), a legume, has become a major source of vegetable proteins and oil for human, animal consumption and industrial use.

Soya flour, grits, texturised protein in combination with other foods, soya oil, cooking oil, soya-milk, curd are some examples of soya use. In Japan, Tofu, a cheese-like curd, which is actually a fermented soyabean paste is greatly used. Sprouted immature green seeds are another of its eatable forms.

Though it has been put to numerous uses, there are certain constraints. Being of plant origin its cell wall is difficult to digest. Also, many patients do not relish its bland taste. Many diseases which strike the soya plant reduce its yield and the technology of soyabean use is yet to be fully explored.

BIOTECHNOLOGY

B iotechnology, a recent area of interest to many applied scientists, economists, industrialists and the government has acquired so much publicity, not only because of its sophistication—'mere vogue' but also its multipurpose utility. The developed countries have undertaken successful projects in this area. Among the developing countries, India is playing a lead role. Biotechnological researchers are trying to solve problems faced in various fields including agriculture, medicine and industry.

The quality that makes it so popular is its man-ern to use biological systems for the maximum benefit of mankind without ignoring the important fact of maintaining an optimum ecological balance. Biotechnology is essentially an interdisciplinary, field involving not only Biology, but other physical sciences as well.

In the field of medicine, biotechnology has helped in mass production of the following substances:

Insulin — This can be used on diabetic patients.

Interferons — These can fight against viruses and cancer.

Monoclonal antibodies — These help in the better response of the immune system to the human body.

TPA (Tissue Plasminogen Activator) — Has the ability to prevent a heart attack.

All these productions involve a simple idea. The genes of the required substance (protein) are put into fast growers and replicating cells and through multiplication, massive production of the substance is obtained.

A well-known Nif gene can change the entire agricultural scene. If this gene can be coupled with the gene sequence of another plant, it may well revolutionise agriculture. Nif gene has the ability to trap free nitrogen from the air, and supply it to plants in the form of nitrate ions and can, therefore, form a natural fertiliser. Today we are able to extract a single cell from a sapling, grow it in culture medium and obtain numerous saplings with exactly the same characteristics as the mother plant within a short span of time. This method is being used by some Indian companies for growing coconuts.

Micro-organisms can prove helpful if they are 'made special' by certain biotechnological techniques. These microbes eat up the hard oil to render it soft, thereby making it easy to handle. Foods, especially the fermented products, can also be subjected to biotechnological magics. A variety of fermented foods like cheese, curd, soya products can be flavoured in many ways and made palatable according to each one's choice. Thus, biotechnology is a sophisticated, omnipotent and powerful tool of mankind. ■

HOW TO ENTER

● Print the answers neatly in capital letters alongwith your name, age and address. Each crossword must be printed/clipped to a larger piece of paper and each appropriate entry must be written only on a postcard.

● You may send in any number of entries but each must be numbered according to and accompanied by a self-resp. COUPON.

● Though all your entries will be included in the draw of lots, you will be entitled to only one prize—the highest score you are getting more than one.

Closing date for the contests: July 25

Address your entries to: The Editor, Career & Competition Times, P.O. Box 110, New Delhi-110 002.

Solutions to this issue's contests will be published in September.



RAJESH PURI: A STAR IN THE MAKING



Rajesh Puri, *yani* ...Lallu, of *Hum Log* fame, is a friendly young man without any airs. Though he started getting small roles in films, some time back (*Jaane Bhi Do Yaaro* was his first film), recognition came to him only when he became popular as Lallu on TV. "It was a very critical decision for me to take. Most of my friends dissuaded me from signing the *Hum Log* contract as they thought it would adversely affect my chances of making it big in films. But, acting in the TV serial was a challenge to me. And I love challenges. I accepted the role and became a star overnight," Puri smiled. And it wasn't the sheepish 'Lallu smile', mind you; it was an intelligent Puri, who spoke with all the seriousness of a professional actor.

A graduate from Delhi University, Venkateshwara College, Puri got interested in theatre at a very young age and often acted in school and college plays. After college he got a job with a firm as sales manager, but did not give up acting. *Yahudi Ki Ladki*, a play directed by Nadira Babbar, in which he did the comic interludes, was appreciated by the big wigs of the Bombay film industry. It was at this juncture that Puri decided to quit his job in Delhi and move to Bombay. "My first break in films came when I was offered a role in *Jaane Bhi Do Yaaro*, but the real recognition came to me

"Dekho... Mehnat Karo... Usha Rani going all out to drive some sense into Lallu."

after I became popular as Lallu in *Hum Log*; and I have signed many new films since then. I enjoy acting both in the TV serial and in movies since both offer me different kinds of challenges. I work equally hard for all my roles and do not take work lightly. It is easy to attain success, but difficult to maintain it", Puri asserted.

Determination, hard work and a will to achieve something are the vital elements of success. "One must also have a definite aim in life to work for," he said. "Good behaviour is also important, especially in the film line."

Puri feels that contacts in the film industry could help a person only to a certain extent, whereas mass acceptance of one's talent is important. "When I started acting in Bombay plays, my performance was appreciated by well-known producers and directors of the film industry. I even came to know some of them quite well; but no one offered me a role. It was only after I was accepted by the masses as Lallu that the film industry also accepted me," he explained. "All aspiring youngsters who wish to join films must have a very practical approach. Acting in school and college plays is not a guarantee to their getting roles in movies. They should not give up other sources of

income to join films since chances are that they may be exploited there. They must work on the professional stage and study the response of both the film industry and the audience. These plays have seasoned actors and directors which makes it easier for newcomers to get recognition if they are good in acting."

Financial security is also essential. "It takes time to get a break in the industry and if one does not have the necessary financial backing, it can be a frustrating experience—for both the person trying for the break and his family. No wonder Puri himself took up a job in Bombay till he was able to consolidate his position in the film industry.

Puri, who really loves acting, has done everything in the theatre—right from getting tea for the established actors to painting sets and even prompting. "I have done a lot of *tapasya* in my life to reach the position I enjoy today. Hard work and determination always pay. I have confidence in myself and I know I can play both comic and serious roles. For every role, timing is very important. This is an inborn trait and if a person has good timing in comedies, then no role is difficult for him."

Unlike some TV serial actors, Puri is not planning to ditch *Hum Log*. "I would first like to finish my work for *Hum Log* and then start something new. In any case, I cannot say anything about the future, especially with the film industry's position so shaky at present. But I would like to concentrate on films just now. I give equal attention to all my roles, whether it is for TV, films or even an ad film. And since I have been able to succeed to a certain measure, I am cautious about maintaining it."

Jyotsana Kapoor, New Delhi

SOME CELEBRATION THIS

Jun 2 saw the network's popular 'Janta colony' family languishing amidst the five-star riches of one of the capital's better known hotels. There was wining and dining, with much ado about nothing. Scotch and champagne poured down the gullets of the very 'Janta' who strongly campaigned against alcoholism, ostentation, extravagance and hypocrisy through a TV serial, which was launched in June 1983. The occasion—*Hum Log* had doddered along to a senile 100th episode.

Well, celebrate they must, but not in a manner most unbecoming of those dealing with down-to-earth middle-class issues! Friends and countrymen, in the press and in public, were invited with open arms "for *Sura Pan* (drinks) and *Ratri Bhoj* (dinner)".

Of the masses, for the masses, by the masses, indeed it is this "Hum Bore!"

AAP LOGON KI PASAND

An overcrowded classroom in New Delhi's Harcourt Butler School. The students are silently caught in rapt attention, all eyes focussed on a sprightly teenager. His effortless attempts at monn-acting and mimicry are a refreshing change from the heavy doses of pedagogy the students are generally subjected to.

This very teenager is now known amongst a wider segment of the populace who are covered by the television map of India. And the same youngster is on his 'star path' to a successful career in films. What's more he has amassed 40% of the popularity votes polled in *CCTimes* 'Most popular *Hum Log*' star' contest. And, Rajesh Puri of course, he is. The *Hum Log* nincompoop, 'representative of the present-day youths' struggle for survival, has been the choice of the majority who took part in the contest. "He is a fine example of those who dream with their eyes open," remarks one of our voters. "He presents a correct picture of the Indian youth who lack proper education and guidance," comments another.

Says Puri, "Lallu often sounds as though he is off his rocker. But he is not. His immaturity is the result of his upbringing."

Talking about his belief in the existence of 'Lallus' in India, Puri says, "In traditional Indian families, youngsters are not allowed to think independently; they are forced to study a particular subject; take up a particular job irrespective of their individual aptitudes; marry the girl chosen by elders; and have babies because the Dadima wants one in the family. Naturally when the youngster faces life's realities he feels lost, lacks maturity, is indecisive and acts foolishly." No wonder he goes to the extent of putting the cart before the horse in plunging into married life even before he

has an established source of income of his own.

Young Puri (he is 28) aspires to be a Charlie Chaplin one day. His dream has partly come true in the Cherry Blossom ad where he mimics good old Chaplin. But he knows that to be a true comedian is far from easy and he is willing to leave no stone unturned. Puri has already put his best foot forward in the star-spangled film world and has signed a creditable number of film contracts with well-known producers. Puri also has a handful of 3-D films. And, luckily for him, the roles are all dynamically different so that he has the chance to let his inborn talent surface in all its forms. All the best to Puri from *CCTimes*.

Poll results: Fools think alike. So they say. But there are times when even wise men may think alike. It's a matter of pleasant coincidence that *CCTimes Hum Logon Ki Pasand* star, Lallu, has also been nominated as the most popular *Hum Log* character by a majority of our readers. Now for the count down... Here's the list of the prize-winning nominators who voted for Lallu. Congratulations from *CCTimes*.

Prize winners: 1. Pinku Rai, Muzaffarpur. 2. Goutam Bose, Calcutta. 3. C. Rajay Kumar, Baroda. 4. V.K. Mewar, Bombay. 5. Pravin Gupta, Raipur. 6. Rahul Bahadur, Jaipur. 7. Pradeep Kumar, Karnal. 8. Kamal Nayan, Roorkee. 9. S.K. Jain, Gauhati. 10. Himanshu Jayaswal, Hyderabad.

Top of the polls results of the *CCTimes* opinion poll:

Nominee	% of votes polled
Lallu	40%
Dadaji	20.4%
Narhe	14.7%
Rest	24.9%

Prabha Gopal, New Delhi

Do you think politics should be allowed on the campus?

The answer to this question is in the affirmative. Politics is an essential part of our national life and it should be allowed everywhere in India if democracy is to live. It is true that politics on the campus is now becoming increasingly complicated, having come under the influence of political parties, often leading to unpleasant consequences. But elimination is not the proper solution. After all, students of today will become national leaders of tomorrow. Moreover, students' unions are essential for college goers who, with advancing maturity, are gradually being able to appreciate the stand of politicians in the national scenario...

Do you think students can remain unaffected by the political goings-on on the campus?

The answer depends largely on the institution itself and on what is meant by political goings-on. If it means conflicts among different groups and their unpleasant consequences, then a student can remain aloof from them, but cannot remain totally unaffected. Chances of remaining unaffected by the unions' activities are rare. In a big city or metropolis campus politics is given undue importance and is greatly influenced by political parties. Even neutral students are sometimes threatened. Fights and duels have become common.

Do you think it is possible to eliminate politics from the campus?

Academic politics can be eliminated by banning it. But it will lead to a state where there will be no union to fight for the students' rights. Such an act will certainly be opposed severely. After all, it is the unions which safeguard the interests of the students. In a state of no politics on the campus, students' activities will be dull. It will also put additional responsibilities on the college authorities as the works of the unions will then have to be taken up by them. Even if academic politics is eliminated, politics from the minds of certain students cannot be eliminated. Some of these young politicians have to make it to the national scene one day. Elimination of academic politics will certainly have unpleasant repercussions...

Do you think political developments on the campus are natural?

This depends on what is meant by political developments. If the polls, the canvassing, the election of unions and their activities thereafter are termed as political developments, then it is surely natural. The conflicts among the supporters of different candidates and the tension during the franchise days too are not very unnatural. But the interference of political parties and the introduction of party politics into the campus which has unpleasant consequences cannot be termed natural. It is done deliberately by power-hungry parties. But if political development is interpreted in the true sense of the term, that is, the gradual and evolutionary process of development of the political system, then politics on campus has little to do with it....

Subrat Kumar Sunder Ray, Delhi
First Prize : Rs 150

Do you think our educational system provides a congenial atmosphere for the breeding of politicians?

POLITICS ON THE CAMPUS

Contest Results

CCTimes announced an essay contest on 'Politics On The Campus' in November '84. The response from our readers was overwhelming. A large number of entries both for and against the topic were received. Obviously this is one-issue students, in particular, feel very strongly about. The best three entries have been awarded attractive cash prizes of Rs 150, Rs 100 and Rs 75 respectively. This is not to say that the other entries were not good—they too made interesting reading. Better luck for them next time.

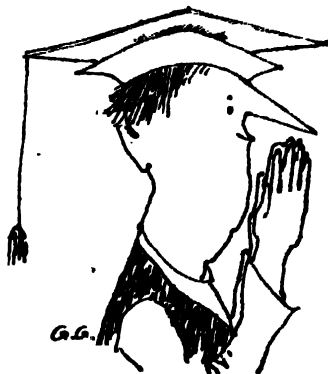
And congratulations to the winners.

Extracts from the prize-winning entries:

Do you think our education system provides a congenial atmosphere for the breeding of politicians?

The answer is in the negative. Of course, many young politicians come from the universities today. But our education system has little to do with that. No course in any discipline is prepared with a view to making good politicians out of students. Political Science,

the subject nearest to politics, is quite different from it. Students learn facts related to the subject, but never go deep into what is called politics for the sake of studies. Some students do so out of their own interest. But most of those who enter even campus politics are motivated by the attraction of the chair. Today, entering politics in student life is considered in-



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VITALITY

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ational system which is at best a modified version of a colonial relic imparts very little education in the real sense of the term. Obsolete syllabi, increasing obsession with exams and memory work to the detriment of rational and intellectual thought, and above all failure of communication between the teachers and students are the common maladies that plague this system. Thus, unable to establish any emotional bond with academics, students turn to politics as a means of escaping from harsh realities. Besides, our educational process which is completely isolated from various economic, social and political realities like gainful employment, population control, and national integration, holds little charm for students who are fast lured into the hustle bustle of campus politics.

Do you think politics should be allowed on the campus?

Depoliticising campuses merely because we cannot find a remedy for curbing students' unrest is almost like cutting off one's head to get rid of headaches. It may be argued that the root cause of violence on campuses is the undue influence of various political parties on the affairs of students. Very often one sees opportunistic political leaders involved in power games on the campuses for narrow political interests. Trivial issues are magnified with political overtones while the genuine problems of students like inadequate library facilities, irregular classes, etc are often overlooked. However, banning elections and prohibiting student associations will amount to robbing the students of their democratic rights of voicing their opinions. Instead, students' unions should be shielded from outside political interferences....

Do you think students can remain unaffected by the political goings-on on the campus?

Campus politics usually involves a large number of students who align themselves to one political party or another. Hence it is difficult to comprehend how the students in general can remain unaffected by political developments in their immediate surroundings. Besides, campus politics usually manifests itself in a plethora of political activities like shouting of slogans, gheraos, demonstrations and more often than not in extreme forms of violence....

Do you think it is possible to eliminate politics from the campus?

Certainly. But this can be possible not through coercion but by getting rid of the root causes which give rise to violence and hooliganism in campus politics. Although the need for a thorough revamping of our educational system can hardly be overemphasised, the immediate task is to stem the rising tide of indiscipline among students by strict administrative measures....

Do you think political developments on the campus are natural?

Yes, campus politics is the natural outcome of the desire of students to voice their opinions on issues which concern themselves and their surroundings. Since they do not have any organised forum from which to voice their concern, the students instinctively choose one political group or another for the purpose. Most often students turn to campus politics not because of any ideological inclination but merely because of a desire for getting together. But one cannot deny that students form a potential group for mobilising political

opinion in our country. And one cannot but remember in this context the famous words of the Kathari Commission report—"The destiny of India is now being shaped in her classroom."

Debashis Chatterjee, Burdwan
Second Prize : Rs 100

Do you think our education system provides a congenial atmosphere for the breeding of politicians?

Yes, it does. In fact, it must, but the calibre of politicians it breeds is largely appalling. The task of education, said Plato, "is to discover aptitudes and progressively train them for social use." Politics is the science of government administration and politicians are specialists in this science. The campus is undoubtedly the best place for breeding these politicians, for, to use the oft-repeated cliché, 'today's students will be tomorrow's administrators'.

Unfortunately, the word 'politicians' today has a very unfavourable connotation. They are merely a set of shrewd opportunists who forget their ideals for money, and are merely in search of more power. And it is a pity that the campus today breeds even worse politicians....

Do you think politics should be allowed on the campus?

Of course! But entry should be restricted only to academic politics...cut-throat professional politics should be kept away from the campus. Ours is a democracy and leaders will be chosen from amidst us tomorrow. If we are ignorant of our administrative set-up, the parties and their ideologies, how can we face the challenge of practically administering 700m people? Professional politics will come later when one makes a career of it....

Do you think that students can remain unaffected by the political goings-on on the campus?

That is impossible; somehow, directly or indirectly, the student is affected by the political goings-on on the campus. When a student is denied admission into a college on political grounds; when he is threatened to cast his vote in favour of some candidate in the elections; when classes are suspended due to strikes or clashes between rival syndicates...the student is the worst hit....

Do you think it is possible to eliminate politics from the campus?

Professional politics has rooted itself in the campus of today, and is hard to eliminate. The campus provides the congenial atmosphere for breeding politics in the worst sense of the term....

Do you think political developments on the campus are natural?

Yes, and this is obvious from the fact that few colleges today are unaffected by political developments within the campus. There are certain conditions prevalent almost in every campus that provide the ground for political developments.

Indiscriminate admission to students, rarely based on their own capabilities or interest in studies but merely on grounds of influence or political connections; the system of conducting elections in a manner most unlikely of students; the 'I-don't-care' attitude of lecturers; total lack of discipline; more of fear than control in the authorities; these are the major reasons for political developments on the campus....

Asha Nataraj, Bangalore

Third Prize : Rs 75

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CANCER

If you were born between Jun 21 and Jul 21, the Sun at the time of your birth occupied the sign cancer.

As such you have a great love of home and a strong desire to cherish and protect others. You are capable and have great tenacity and faithfulness where affections are concerned. You are unimaginative and emotional and a real nagger. You have a sharp intellect and an independent nature with a sufficient amount of self-confidence.

You have a weak constitution. You eat more than you need but that does not help your weight. Your system is so sensitive that loud noise and voices could upset you. Your environment is, therefore, extremely important for you. You want peace and harmony and given such an atmosphere you can concentrate and produce very good results. You cannot be hurried through. The deadlines and pressures add to your problems.

You can absorb ideas and turn them into fruitful ventures. You are faithful and work for others without having your ego deflated. You prefer to work for bigger organisations. You are attracted to jobs that require manual dexterity, adaptability, sympathy, and an ability to meet large numbers of people. Recognition and publicity are important to you although you are not conscious of it. You persistently stick to your goals but take your time reaching them. If you are in a career that allows you to explore your creative sense, your talents can be developed to achieve resounding success. Unless you are in a big company, where responsibilities are changed quite often, you are likely to change your jobs quite often.

You are generally romantic, sentimental and subject to rapidly fluctuating moods, but in love affairs you show a great tenacity and faithfulness before allowing any mood or outside influence to interfere in your existing relations.

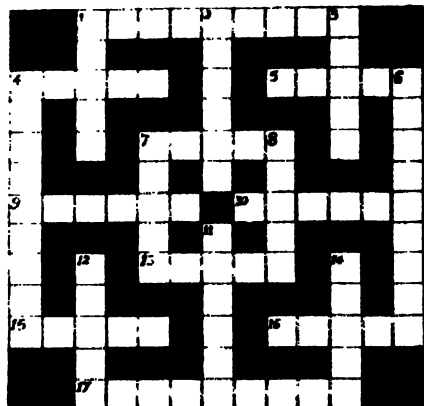
You are likely to be benefited in career and in financial matters in your 21st, 28th, 42nd and 48th year. Between Sep. 10 and Oct. 27 a number of opportunities will arise to raise your status or benefit you in one way or the other. Success is assured but the quantum of success will be restricted to the amount of effort you put in. In 1985 you will have to put in more work to achieve your targets. Travelling may also become very frequent and may occasionally interrupt your normal routine. 1986 will be the most memorable year of your life. Besides financial gains your status will be elevated. Hard work and perseverance in 1985 will pay a very rich dividend in 1986. Further efforts in 1986 will optimise the favourable planetary influences and add colour to your life.

Lachhman Das Madan, New Delh

Kenwords-44

BY HANI P. SOMAN

WIN RUPA PAPERBACKS



ACROSS

- 1 An argument of deductive reasoning expressed in a logical form, a theory first formulated by Aristotle. (9)
- 4 US author, had never seen battle when he wrote the highly imaginative and successful book *Red Badge Of Courage*—a study of fear felt by a soldier in the civil war. Other works—*Maggie: A Girl Of The Streets* and *The Open Boat And Other Tales*. (5)
- 5 Parliament of Afghanistan. (5)
- 7 The fundamental ingredient. (5)
- 9 In Greek and Roman mythologies, minor deities usually taking the form of young maidens. (6)
- 10 counter is used to detect radioactivity. (6)
- 13 Italian, hero of the 1982 World Cup Soccer Tournament. (5)
- 15 Jebel Musa or Mt—, where it is supposed Moses was given the Ten Commandments. At the monastery of St Catherine nearby was found the Codex Sinaiticus, a manuscript of the New Testament. (5)
- 16 Secret society or brotherhood, originating in 18th century Sicily (5)
- 17 In Greek mythology, a youth who pined away for the love of his own image and was transformed into a flower (9)

DOWN

- 1 An ace that is all around us. (5)
- 2 Town in Texas about 10 miles southwest is the meteor crater, the second largest such phenomenon in the US about 600 ft wide and 164 ft deep. (6)
- 3 A huge tropical African timber tree of the mulberry family (5)
- 4 A school of Greek philosophers who evolved a hedonistic ethics which declared pleasure to be the only good, thus virtuous living implies the striving for and gratification of desires (9)
- 6 Also known as Tierra de O'Higgins by the Chileans (9)
- 7 River Kosi is the sorrow of — (5)
- 8 A term for obstruction of the intestine with severe pain and vomiting goes up. (5)
- 11 An East African soldier (6)

12. Russian revolutionist, founder of the Bolshevik and Communist Party and of the Soviet state, a near deity to communists: millions annually visit his mausoleum in Red Square, Moscow, where since 1953, his embalmed body has been continuously on view. (5)
14. A Muslim theological student attached to a mosque goes up. (5)

OBSERVE & DESERVE



OUT OF TOUCH

Here's another illustrative gimmick from GOPI GAJWANI's 'tricky-tricky' drawing-board. Let's see if you get tricked by this one. And, if you are the type who is overly conscious, then you'll probably see through Gopi's game in a jiffy. If you aren't, well it's just too bad. You'll have to tease your brains a wee bit to tell us in **not more than 20 words** what's wrong.

SOLUTIONS

KENWORDS-42

Across: 1. D. Bushnell 7. Yield 8. Seoul 9. Capua 11. Logic 13. Radium 14. Saturn 16. Varig 18. Idaho 20. Ernie 21. Liner 22. Electrode

Down: 2. Bull 3. Hansa 4. Encore 5. Lyell 6. C. Dascario 9. Caravelle 10. Ujiji 12. Octad 15. Danube

Winners

First Prize (all-correct): 1. Gyan Prakash Soni, New Delhi. 2. I. Sivaji, Rajahmundry (Andhra Pradesh).

Consolation Prize (one-error): S. Venkatesh, Bangalore 2. Vasanthi R. Nayak, Mangalore. 3. M. Suresh, Bangalore. 4. K.V. Dayananda Kumar, Tiruchirapalli. 5. L.L. Satyavathi, Kakinada.

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SPORTS QUIZ-42

1. Lawrence Rowe (West Indies)
2. Bill Ponsford, Doug Walters, Alvin Kallicharan and Azharuddin
3. Polo
4. Liaoning Club, China
5. Foil, epee and sabre
6. Orange
7. Pole vault

Winners

First Prize (all-correct): 1. R. Badrinath, Madras 2. Amit K. Agarwala, Delhi.

Consolation Prize (all-correct): 1. Sunil Agarwala, Delhi. 2. Manish S. Ladha, Thane. 3. Ashok Mathew, Jagdalpur P.O. (MP). 4. Lalit Kumar Saraf, Raniganj. 5. Sanjay Yashroy, Chandigarh.

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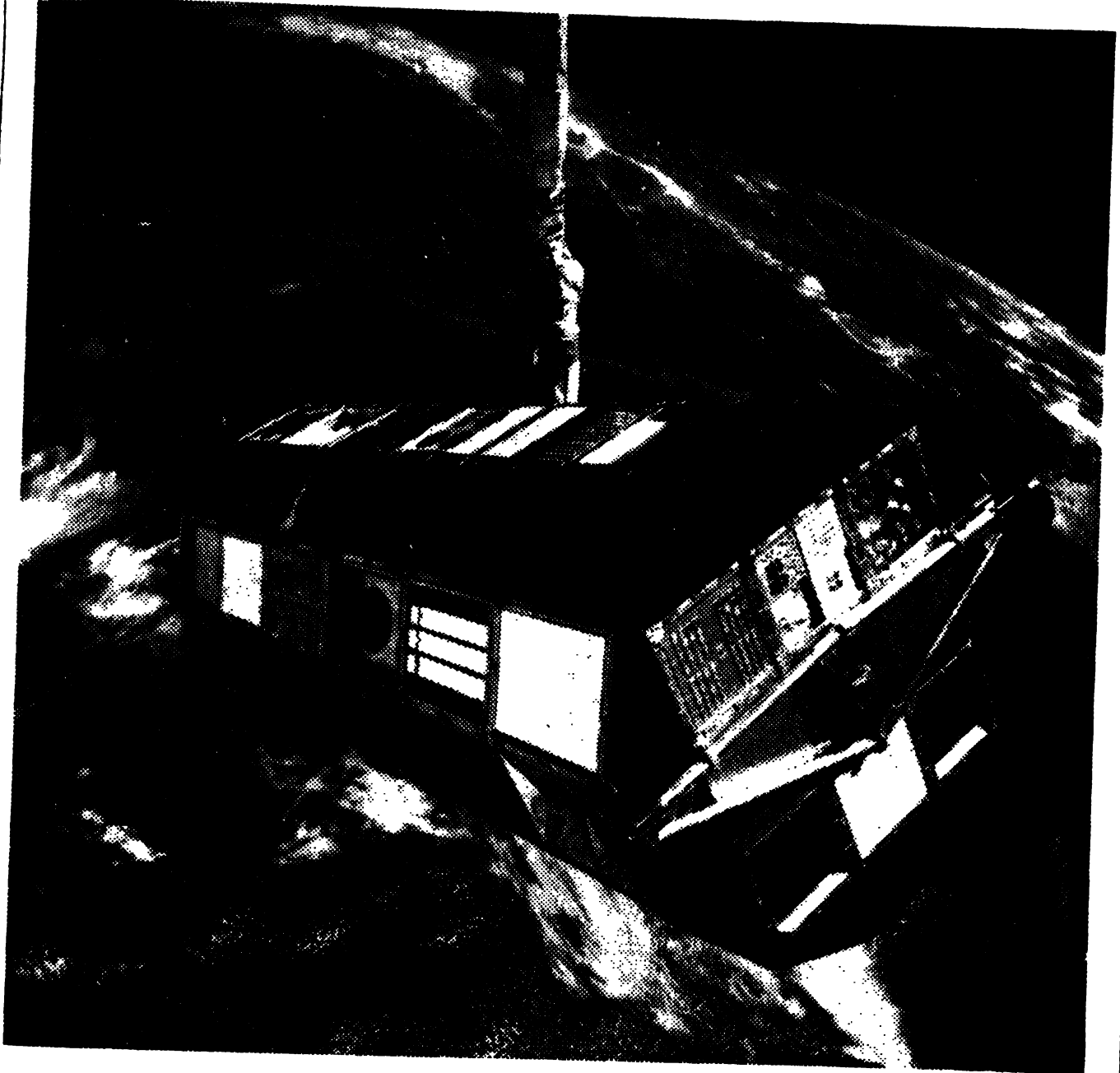
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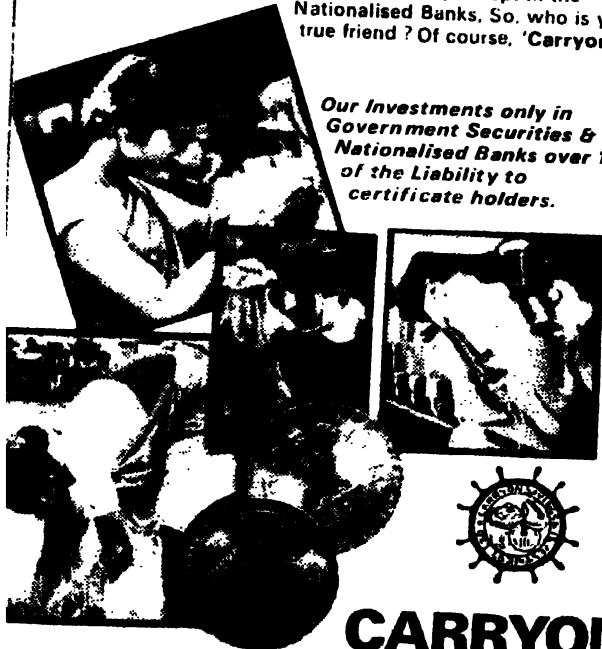
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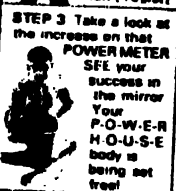
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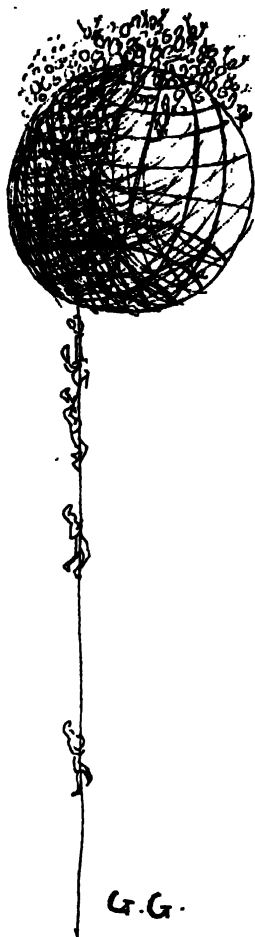
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programmes ● **DEFENCE:** Analysing Indian defence perspectives and security relations with
particular reference to South Asia and the arms race. Plus our regular features.

LETTERS

Police Practice

Hallo Folks (June '85) has rightly pointed out that the Indian police has developed a habit of playing around with the lives of innocent people. Perhaps the Indian police has forgotten that in POLICE P stands for polite; O for obedient; L for loyal; I for intelligent; C for courage; E for efficient.

Siddique Hussain, Burhanpur (MP)

In your matter of fact editorial (June '85) you have done justice to the topic. The protectors, the saviours and the defenders have become destroyers, killers and offenders.

Sunil Gautam, Jalandhar

In the far off lands they ask us, "Hey, you must be damn scared of the terrorists at bay." So we give a grim smile and say, "Stop these child-like guesses please! You haven't yet seen our police."

Rashesh Jethi, Ahmedabad

Mental Ability Special

The *Care Issue-6* (June '85) was particularly interesting and useful as it contained in 21 pages material that would otherwise have been in a costly book form. This issue is worth retaining for future competitive exams as well. I wish to congratulate your editorial staff for taking pains and collecting useful material on *Mental Ability*.

G.M. Nayyar, Chandigarh

I take this opportunity to send you my appreciation for writing such a detailed and interesting write-up on the subject *Mental Ability* (June '85) which is very useful for candidates appearing in all sorts of examinations.

G.T. Chari, Madras

Reservation Stir

The article *The Bomb Ticks Away* (May '85) is superficial and biased. Its single objective was to derogate the ST/SC students. Publishing such an article was reprehensible on the part of *CCTimes*.

Mukul Pradeep Kumar, New Delhi

The Bomb Ticks Away (May '85) lacked objectivity, background and historical facts.

Ramesh Chender, Simla

It is an agonising experience to know that even after 48 years of independence, we are undefined. Almost every official paper requires us to certify which community (SC, ST or General) we belong to. Don't they know that we belong to only one community and that is the Indian community? Undoubtedly, the reservation policy is perpetuating the caste system which is against the dreams of the Mahatma who aspired to live in a classless India.

Sunil Kumar Mehta, Dehra Dun

Violent Waves

Violence is simmering everywhere. Still I hear people sing *Sare Jahan Se Achha Hindustan Hamara*. Is this what the media calls 'farical optimism'?

Archana Sood, Jalandhar City

Military here, military there, military everywhere.
Ahmedabad's (some) for them, surely care.

The moment military men are not anywhere—
Buildings and shops go up in flare.

Gautam V. Sondarva, Jamnagar

Regional Unity

Are we ready to combat the giant of regionalism for the sake of our beloved motherland? Time calls us.

Amerendra Nath Verma, Bettiah (Bihar)

So far as the religion of nationalism is concerned a majority of us are apostates or atheists. We (the majority) are loyal to our family, caste, region or language. National integrity and love for all are sacrelegious.

Tirumal Mundargi, Gulbarga

Where books failed to make me understand what a 'secular India' means, the Punjab turmoil succeeded. Apparently it means giving concessions to religious minorities at the cost of the nation's unity, integrity, peace, and, of course, numerous innocent lives. Besides, rendering the government power(less) enough to look on helplessly when assassins are crowned martyrs.

Priya Singh, Bhilai

Generation Gap

An 80-year-old 'young' man fights for 'star wars'. A 40-year-old 'man' fights for disarmament and world peace. A generation gap?

S.P. Chaukinath, Dharwad (Karnataka)

Best Letter: Rs 40

Wanted: Jobs

Our education system, everyone agrees, should be job-oriented. But where are the jobs?

S. K. Sanyal, Calcutta

Prize-winning Letter: Rs 25

Tragedy Of Terrorism

More tragic than the tragedy itself are the fatal lapses in the security umbrella that make the bloody task of the assassins that much easier.

Santosh Kumar, Patna

Terrorise the terrorists to combat terrorism.

K.P. Raghupati, Nagpur

Of What Use Hum Log?

I was disappointed to read about the TV serial *Hum Log* and its characters in your two consecutive issues (May and June '85). I am afraid Ahmedabad, Punjab, poverty, communalism, casteism and inflation cannot be solved with serials like *Hum Log* to assist our judgment and perception.

Puneet Dhawan, Jaipur

Forgotten Priorities

While the government is all set to enter the 21st century, some persons are hampering its efforts with their ignorant demands for petty things like food and shelter. Hopefully in the 21st century the government would consent to give them computers and TVs.

Prashant Mishra, Dhanbad

•FREEDOM TO COMPETE

There has been an overwhelming response to Sanjay Kumar Jaiswal's views (*Free For All: Letters*, May '85) that so long as a candidate fulfills the necessary basic qualifications, marks should not restrict him from competing with others in competitive exams. Some opinions:

Setting a minimum standard for eligibility to compete in entrance exams is not unfair. A person's admission to any institution should be on the basis of his performance not only in the entrance exam, but also in his previous exams. After all the intelligence of a student is not like the rising or setting of the sun. To criticise various institutions for their strict stand on issues like minimum qualifying marks is to point towards one's own underdeveloped intelligence and low calibre.

Yogesh Kalra, New Delhi

It is absolutely unjust to debar a candidate from appearing in any competitive or entrance exam only because he has not secured the required percentage of marks. Considering the kind of educational system we have in the country, it is downright unfair to judge a person on the basis of marks.

Rajiv Porcoial, Faizabad

Equal competitions for unequal IQs—this sounds fascinating but is in fact inadvisable. The standard of minimum marks is usually nominal and can be achieved by any person of average IQ; one below this standard cannot be expected to do any better in competitions. When we are not able to provide the swelling numbers of educated unemployed with jobs, where is the sense in including those who fall below the prescribed standard.

Ajay Kanotra, Avesti (Tamil Nadu)

Our exam system at the college level leaves much to be desired. It does not purport to bring out the best in the student and evaluation is erratic as a rule than as an exception. So, testing the candidate's knowledge in the competitive exams would be more prudent than prescribing minimum marks in the qualifying degree.

V. Rengaswamy, Madurai

To allow those with lesser IQ to pursue higher studies is merely a national wastage which, in the long run, accentuates the burgeoning unemployment problem. Our educational policy must be modified to allow brilliant students to go ahead and arrange for the rest to be trained vocationally for self-employment.

Pramod K. Sahoo, Distt Surguja (MP)

Usually, the basic educational requirements for various entrance exams are degrees. The traditional university exams are based on questions which can be answered satisfactorily just by memorising a few stereo-typed answers and do not require in-depth knowledge of the subjects concerned. Under the circumstances, setting a minimum standard is inappropriate.

Vivekbrata Biswas, Gauhati

A Questionable Issue

In *Moonis Raza: Devout Educationist* (Jul '85) the new Delhi University VC in answer to the question 'Do you feel that evaluation of teachers by students would help?' said, "Students always evaluate teachers. Ask a student and he will tell you who is a good teacher. And a good teacher survives on respect which comes not from patting backs but from teaching well."

The answer published for the above query was actually for the question 'Do you feel that college teachers update themselves from time to time?'

The error is regretted.

-Editor

Hello folks...



Jun 23, 1985, will go down in the history of civil aviation as 'Black Sunday'—the day when a few mindless fanatics blew up the Air India Jumbo 'Emperor Kanishka', flying 5.9 km above the earth, killing all its 329 passengers and crew. Since the evidence (whatever little is available) does not prove anything definite, and the possibility of collecting foolproof evidence is remote, we perforce depend on circumstantial evidence. The movement of two suspected terrorists before the explosion; the suddenness of its disappearance ('one second it was there, and the next it was gone,' said the Chief Air Controller, Heathrow Airport); uninflated life-jackets and life-boats in the Atlantic; no report of bad weather; 747 being the safest aircraft ever designed (in February 1985 a twisted tail turned a Chinese Airline 747 upside down, which nosedived 30,000 ft, righted itself and landed safely in the US); and that it was being commanded by one of the top five pilots in the airlines, points out that bomb explosion is the only plausible cause of the crash. Corroborates Capt Peter Delaney, Air Safety Officer for Aer Lingus, the Irish national airline. 'The whole situation screams out that it was a bomb.'

'The air crash has shaken the world's conscience,' said George Bush. More shaken are the world's 2m people who

travel by air everyday; terrified are those left in homes not knowing whether their kith and kin would return alive.

The crash has forced the world community to take a grim look at terrorism as never before. When terrorists killed four US marines and two civilians in San Salvador, the American President said, 'We have our limits; and our limits have been reached. This cannot continue.'

The tragic disaster demands serious analysis of the situation. Firstly, why have the developed countries in general, and the US, the UK and Canada in particular, adopted a 'who cares' attitude? The US has provided the secessionists a respectable forum, the UK allowed the celebration of Indira Gandhi's assassination and the official sources in Canada financed secessionist organisations, granting citizenship to persons like Talwinder Singh Parmar—a terrorist wanted by the Indian authorities for the murder of two police officers.

The disclosure of a number of commando schools for mercenaries—particularly Frank Camper's in Alabama in the US, where two Sikh terrorists were trained, at a fee of \$10,000, to blow up selected targets in India and Indian targets in the US—and the knighting of Armand Singh, Lal Singh and Gurpratap Singh Birk as 'holy warriors' who are going to form 'another PLO', is agonising.

More repulsive is the attitude of the Canadians who ignored the requests of the Indian High Commission for more stringent security. They have washed their hands off all responsibility saying that it was the job of Air India to check the baggage and security. Is it a desirable attitude? *The Times Of India* editorial says, 'Criminals have acted in Canada and it looks as if their task has been facilitated by the could-not-care-less approach of Canadian authorities.' Unless the government in Canada smashes the breeding centres of terrorists, such incidents cannot be checked. Misleading is the suggestion by certain groups in Canada that the plane crashed because of an extra engine in one of the wings of the plane, forgetting that a fifth engine pod is designed in the aircraft to carry a spare engine for repairs. Even if it was not there the pilot was capable of

bringing it back to earth with even one wing. Mischievous is the story that the pilot S.S. Bhinder accepted a packet to be delivered in India which probably became the cause of the accident.

The third biggest tragedy in aviation history, it should initiate a debate on how to ensure maximum air safety to passengers and crew. We must learn from the Al El, the Israeli air service where no hijacking has taken place since 1968. We must formulate and rigorously implement foolproof methods. The airports and the aircraft must be guarded like army installations. The drill for security check must be thorough. Alternate arrangements should be readily available in case one system fails. The methods of checking security and persons managing it should constantly change so that terrorists are not able to identify the system and prepare a plan to foil it. Indians in particular have to take their job more seriously. In fact, we take things lightly and leave many things to God. God does ultimately help but it is up to us to run the system. God will not do that for us.

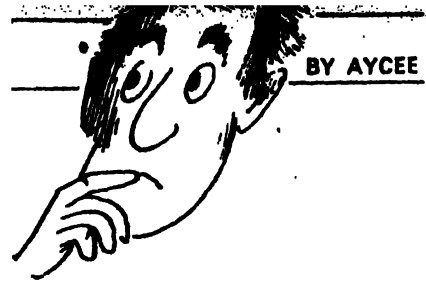
The developed countries have to be more responsible and not allow their societies to become completely permissive. The free sale of sophisticated arms and open training to extremists should stop henceforth. If these countries do not have laws to curb such activities, they should frame a few.

At a time when a string of extremist activities have shaken the world to the realities of terrorism in the air, the governments will have to think in terms of mutual cooperation. 'The battle requires international solidarity,' said Erich Becker, the Chairman of Frankfurt Main Airport Inc.

Man did not make the world but has acquired the capacity to destroy it and the terrorists are taking the world towards *kayamat or pralay*—doomsday. Should we permit them to do so?

E. H. Anderson

TEST YOUR WORD POWER



The per-fect WORD. Is it on the tip of your tongue or is it hidden in the back of your mind? Either way, we agree, it's an eloquent

And so each month we bring you this column, tailor-made to suit your requirements. Twenty new words complete with their meanings and usage.

But what's so unique about our word power exercise? The 20 sentences are information-packed and fact-laden—facts which are often not easily available. A weighty two-in-one package, wouldn't you agree?

Tick the word or phrase you believe is *nearest in meaning* to the key word:

1. **apprehend**: A: to arrest B: awaken C: inform D: come nearer
2. **ostentatious**: A: prosperous B: bitter C: showy D: harsh
3. **avid**: A: dry B: stingy C: rapid D: greedy
4. **barricade**: A: to block off B: force one's way in C: order the closure of D: tie up
5. **berserk**: A: (go) uncontrollably wild B: odd C: stupid D: disloyal
6. **brawl**: A: scamp B: noisy quarrel C: a system of writing for the blind D: salt water
7. **buoy**: A: to raise the spirits of B: bend the body C: expand D: swim like a fish
8. **dismember**: A: to divide B: dig up C: forget D: put out of position
9. **erode**: A: to wear away B: carve C: shatter D: hammer out
10. **fad**: A: short-term measure B: fabulous piece of art C: loss of colour D: fanciful fashion
11. **glare**: A: quick look B: subdued light of the dawn C: strong light D: wide-eyed look
12. **levy**: A: to impose B: mix C: float D: move
13. **lump**: A: wet land B: roughly prepared wood C: painful eruption D: hard mass
14. **lurid**: A: angry B: passionate C: violent and shocking D: enticing
15. **mirage**: A: feeling of happiness B: soft, deep mud C: any illusion or hope that cannot be realised D: severe headache
16. **notion**: A: wish B: idea C: warning D: a musical note
17. **ossified**: A: savage B: uncultivated C: rigid D: strong
18. **referendum**: A: a vote of thanks B: a ballot C: the submission of a dispute to a judge D: the submission of a proposed law to a popular vote
19. **spartan**: A: well-dressed B: uncomplicated C: frugal D: careless
20. **supersede**: A: to take the place of B: make an addition to C: overcome D: put an end to something

(Answers on page 60)

THOUGHTS

Here's some food for thought ... provided you pause to ponder over it. These passing thoughts on various social, political and economic issues, expressed by a few observant minds, often portray the bare realities of life. They may even set your thought processes in motion!

... the horrendous level of black money in India drains the exchequer, though it does fertilise the economy in its own way (as by promoting housing), and falls oppressively on the poor and deprived. Fighting black money is a continuous process and there is need for eternal vigilance.

Indian Express

There is nothing wrong with assuming violence provided it hits those who deserve it, and changes their ways.

The Economist

Airport security will never be perfect but the efforts to improve it have had some success: hijackings, which occurred at a rate of 70 a year 15 years ago, were down to 17 last year. The problem is how to maintain the downward trend.

The Economist

... there has been a massive transfer of corporate power into the hands of a new, younger post-independence generation... there was of course a certain inevitability about this... because 82.8% of the country's population is in the below-44 age-group. And it is hardly surprising that this younger populace which is better educated and better informed has more faith in its own generation rather than in the slow and steady older generation which, though rich in experience, has been slow to innovate and perhaps patient to a fault.

Business World

... flying has, perhaps, entered its most dangerous age... not because of the machine but because of man. Even while the advances in technology have made the machine safer, the human being has become that much more sophisticated in his ability to destroy. Suddenly, for every Indian in particular, the sky is tinged with the colour of blood.

M.J. Akbar, *The Telegraph*

The answer lies in strengthening the political process, especially at the grassroots, so that national resilience is born out of a sense of participation, and rulers and ruled are bound by a common determination to resist blackmail and terrorism.

The Statesman

It (government) should know by now that nearly 18m small enterprises in the country, employing 53m people, generate taxable incomes but pay no tax. It should be easy enough to bring them within the tax net, if the tax collectors mean business.

The Times Of India

The basic postulate of the parliamentary system in the country is that the people's representatives will run the administration autonomously at each tier—Central, state and municipal... This is mere theory... In practice the Chief Minister is a Central nominee. He cannot resign without its consent. He cannot expand the Cabinet or appoint or sack its members save with the High Command's consent.

The Herald Review

QUOTABLE QUOTES

That war is an evil is something that we all know, and it would be pointless to go on cataloguing all the disadvantages involved in it. No one is forced into war by ignorance, nor, if he thinks he will gain from it, is he kept out of it by fear. The fact is that one side thinks that the profits to be won outweigh the risks to be incurred, and the other side is ready to face danger rather than accept an immediate loss.

Thucydides

There are two things to aim at in life: first, to get what you want; and, after that, to enjoy it. Only the wisest of mankind achieve the second.

Logan Pearsall Smith

The Right Honourable gentleman is indebted to his memory for his jests, and to his imagination for his facts.

R.B. Sheridan

Did you ever expect a corporation to have a conscience, when it has no soul to be damned, and no body to be kicked?

Edward, First Baron Thurlow

Death said: 'The good is one thing, the pleasant another: these two, having different objects, chain a man. It is well with him who clings to the good; he who chooses the pleasant misses his end.'

Upanishads

Those who offend us are generally punished for the offence they give; but we so frequently miss the satisfaction of knowing that we are avenged!

Anthony Trollope

'Tis an old maxim in the schools/ That flattery's the food of fools;/ Yet now and then you men of wit./Will condescend to take a bit.

Jonathan Swift

POPULATION

Its Various Dimensions



BY ANITA NARAYAN, & SRIDHAR RAMAN

India's population problem is compounded by a crowd of socio-eco-cultural and religious dimensions. Solving it involves an equally divergent array of issues like education, women's liberation, infant mortality and medicine.

And the population bomb can be defused only if every agency is involved and every individual is aware of his social responsibility. Tracing the various aspects of the problem.

Pandit Jawaharlal Nehru once remarked: "India's population problem is not one but 400m problems." Today that problem has flared up to 743m problems.

The Indian population bomb is well on its way to exploding. Population explosion is not just a bad dream for millions of Indians; it is a scary reality. The Indian population which is presently 743m is growing fast (by 16m annually); in fact it is sizzling along at a pace that thwarts all efforts at breaking through the fetters of poverty and backwardness. And if the present growth rate continues, India's population is expected to double itself in the next 45 years making it 40% larger than China's present population. Boom in population at this rate will, in the years to come, make impossible demands on the limited resources of the State dragging it even further into the morass of abject poverty. If India intends to take its place among the world's foremost economic powers, as prophesied by PM Rajiv Gandhi in a recent interview to the *Newsweek*, then it must make population control a crucial lynchpin of any strategy to battle against its myriad problems.

It is fairly well established that a vast majority (nearly 30%) of population growth in the coming decades will occur in the developing world. Out of a total projected world population of 6.2b in 2000 A.D. the population of the developing world is expected to be 4.5b (from *International Encyclopaedia Of Social Sciences*, Vols. 9, 10, 11 and 12). It is in this regard that the note of warning sounded by the Worldwatch Institute in its *State Of The World Report, 1985*, is pertinent. The institute notes: "These coun-

tries (the sub-Saharan, Latin American and south Asian), if they are to avoid a further decline in living standards, may have to adopt the one-child family norm emulating China." (See Map)

In the Indian context it is, of course, necessary to enforce such a norm with discretion and a sensitive understanding of our social customs, traditions, personal attitudes and health security. The sense of seriousness and urgency of the problem has been growing on the leaders of the Third World with the result that there is now a perceptible change of attitude towards family planning in these countries. As Rafael Salas, Secretary-General of the 1984 Mexico conference on population, remarked: "Ten years ago, you could not find people knowledgeable about population; now virtually every government has developed its own corps of experts and programmes". Nowhere is this change of attitude more remarkably manifested than in China; ten years ago at the Bucharest population parley, China bitterly inveighed against family planning, dubbing it as the capitalist West's tool to subjugate the Third World. Today the Chinese have the kind of family planning campaign operating in their country which is not only aggressive but tends to be draconian in its approach. Such drastic shifts in attitudes have occurred because a vertiginous population growth has now been widely identified as the chief reason for under-development. (See Table B)

Popular Theories

The present population crisis in many of the Third World countries is an echo of warnings sounded earlier by prophetic demographers. Thomas Malthus, an 18th century demographer, in his essay *Princi-*

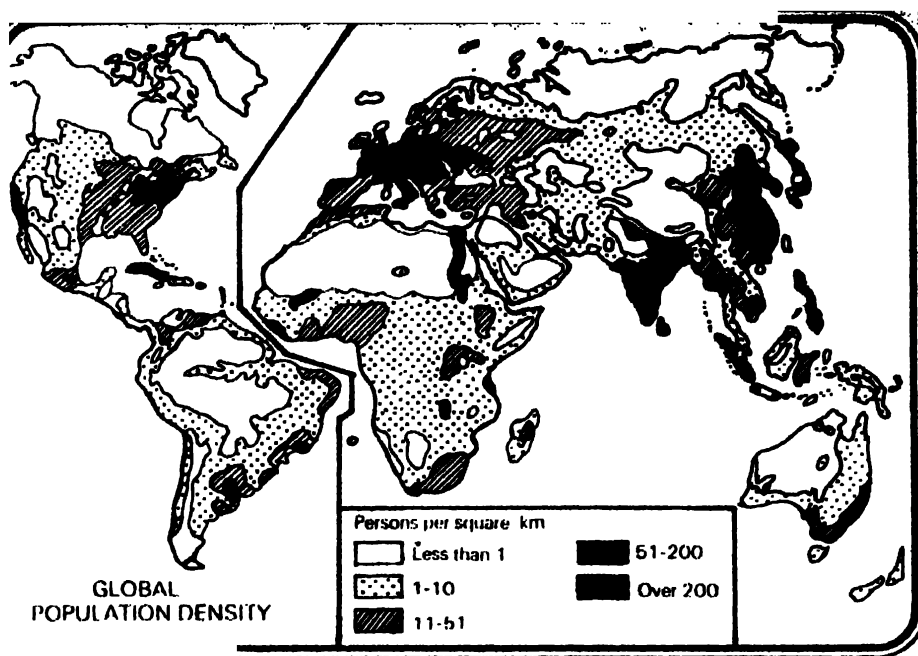
ple Of Population As It Affects The Future Improvement Of The Society,

held the general view that if population grows in geometric progression and outstrips the means of subsistence (which moves in arithmetic progression) then the former factor will absorb all economic gains. This view, although influential, was severely criticised.

Marxists regarded the preoccupation with population growth as simply an imperialist fetish and considered poverty to be the result of oppressive social institutions rather than population growth. Further, during the 19th century, in the wake of the industrial revolution, Europe experienced a massive economic upsurge which greatly outpaced population growth and led to a general increase in living standards; this was accompanied by a uniform slide in birth rates in that continent. However, the recent trend in population growth, especially in the developing countries, has again placed Malthusian views in the forefront.

Stagnation

"A war on poverty would simply have to be a war on population" observed the *World Development Report 1985*. Ensclosed in this seeming overstatement is a kernel of truth. In India, for instance, the national income, since independence has grown at a healthy rate of 3.5% per annum, but the per capital income, in the same period of time, has crept up by a mere 1.5% per annum, so that even though the people haven't exactly got poorer in the last 30 years, they have not been getting richer either. They have stagnated around the same levels of impoverishment. Most of the hard earned fruits of development have been absorbed



while female literacy was one-seventh and contraceptive use one-third of the level prevalent in Kerala. Thus the close relationship between literacy (especially female literacy) rise in per capita income and reduction of the infant mortality rate are evidently essential prerequisites of controlled population growth. India's record in these areas has not, however, shown, any significant progress. Literacy among women, especially in rural areas, is an extremely neglected aspect and till 1981, three out of four women were illiterate.

Infant Mortality

India along with Iran shares one of the highest rates of infant mortality in the world—120 per thousand live births. Neglect of female children has contributed immensely to this figure. A study of infant and childhood mortality in Andhra Pradesh revealed that it is usually highest among Muslims and Harijans and comparatively lesser among non-Harijans, thereby reaffirming the intricate relationship between population growth and socio-economic development.

Though it is recognised that the benefits of child welfare would go a long way in combating the population problem, in India this area has received little attention. Despite it being a welfare state child labour abounds, with Andhra Pradesh having the highest rate. The obvious motivation leading to child labour is that the low wage structure of the parents, combined with their large family, forces the parents to permit their children to work so as to supplement the family income. This prevents the children from being exposed to any educational facilities. Also, the high rate of infant mortality induces the parents to produce more children. Thus, child labour has a definite influence in determining the fertility rate in India. Legislation for the abolition of child labour along with other incentives such as free education, the mid-day meal scheme, scholarships, etc. might prove helpful in mitigating this problem. It is important to raise the marriage age to at least 19 years, not only to postpone child births but also because the infant mortality rate is the highest for the first and second order of births. Even the Child Marriage Restraint Act which fixes the minimum age of marriage at 18 for women and 21 for men has yet to be seriously implemented.

Hence, the fact that socio-economic development is an essential concomitant of population control is clearly evident and it is this aspect which was clearly highlighted at the United Nations second International Conference on Population held at Mexico City in August 1984. The first International Conference on Population held at Bucharest ten years earlier was polarised into two camps, according to whether priority should be given to family

by the ever-swelling population.

Not only does a rapidly bloating population nullify the gains of development, it also has an adverse effect on income distribution. For example, the number of jobs and wages are largely fixed in the modern sector of the economy. Therefore, the most telling impact of population growth on size of labour is felt in the rural and traditional sectors of the economy. Similarly, since it is the poor who have larger numbers of children and their growth in numbers is relatively faster, income disparities are likely to be exacerbated.

Population Control

Concern about growing population led India's planners to launch a nationwide family planning programme in 1952, making it the first developing country in the world to do so. Symbolised by the inverted red triangle, the programme initially adopted the model of the three-child family, though presently, in view of the seriousness of the situation, it advocates the two-child family norm. The only significant achievement of this programme has been the decline in the fertility rate from 6.5% in the 1950s to 4.3% in 1982. No other country at India's level of socio-economic development has a lower fertility rate. Some success in raising female literacy and lowering infant mortality along with more accessible family planning services have played significant roles in reducing the fertility rate.

However, population in India continues to increase at the spiralling rate of 16m annually which is more than the population growth rate in any other country in the world. This is largely due to relatively high fertility rates and declining death rates in the last three decades which means that

women entering the child-bearing age form a large proportion of the growing population.

Indian population is basically pyramidal in structure. At the base of the pyramid is the 0-9 age-group with gradual decline in the higher age-group. This means that as the women of this age-group enter the childbearing age within the next 20 years there will be a phenomenal spurt in population. The only solution to this critical situation lies in widening the family planning programme so that 60% of the couples, as against 28% now, are brought within its purview. Strict enforcement of the Child Marriage Restraints Act (1929) is also a vital step in this direction. In India, the mean age at marriage has been low as compared to other countries. However, it has been slowly rising between 1991 and 1971 (See Table A).

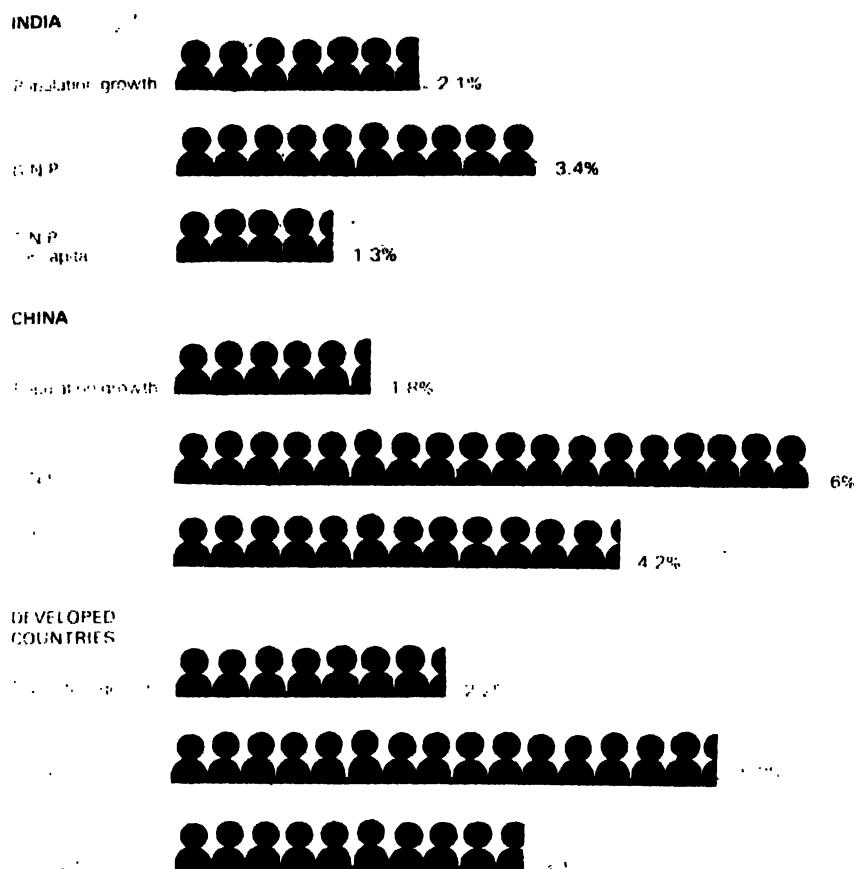
The fertility rate in India displays wide variations. In 1973, Kerala had the lowest fertility rate of 2.7%. At that time, three-fourths of Kerala's women were literate; infant mortality was 47 per thousand live

Mean age at marriage (Table A)
(age in years)

	Males	Females
Norway	23.0	24.4
East Germany	27.4	24.7
France	26.0	22.6
Japan	25.3	23.0
India (1921)	20.7	13.7
(1951)	19.9	15.6
(1961)	21.6	15.8
(1971)	22.2	17.2

births and 32% of couples were protected by modern contraception. In contrast, the fertility rate in UP was as high as 5.6%; infant mortality was over 150 per thousand

POPULATION GROWTH VS ECONOMIC GROWTH (Table B)



Source: World Bank

POPULATION EDUCATION

Population Growth: The total natural increase in population consisting of births minus deaths and net migration consisting of immigration minus emigration.

Population Growth Rate: Annual rate of natural increase (birth rate minus the death rate in a given year) combined with the plus or minus factor of net immigration or net emigration.

Birth Rate and Death Rate: Annual number of births or deaths per 1,000 people.

Infant Mortality Rate: Annual number of deaths of infants under one year of age per 1,000 live births.

Total Fertility Rate: Average number of live children at each age in accordance with prevailing age specific fertility rates.

Population Momentum: Large increase in the number of women entering the child-bearing age offsets the benefits of a declining fertility rate whereby rapid population growth continues due to the initial momentum.

Optimum Population: Under given conditions in a country the concept of optimum population signifies a population size that is preferable to any other, larger or smaller.

Population Trap: The population surge that follows any increase in per capita income. Such population increase slows down the growth of per-capita income simply because any increase in total income must be shared by a larger number of people.

Demography: Study of population.

Emigration: Movement of people from one country to another for life or residence.

Immigration: To come into a country of which one is not a native and to take up permanent residence.

Over Population: Excessive population. Population in excess of what a region's size and resources can sustain.

Population Projections: Scientific prediction of the population size of a region for the coming years.

Sex Ratio: The male-female ratio in a given population. In India there are 1,000 males to every 935 females, thus the sex ratio in India would be 1,000 males: 935 females.

Floating Population: A mobile population which does not dwell permanently in a region but regularly moves in and out of it.

Depopulation: A phenomenon restricted to certain developed countries like East and West Germany and France in which there is a reduction in the absolute number of people as a result of the birth rate being lower than the death rate.

family programmes or to development. India supported the latter.

The Mexico City Conference, attended by 149 nations, however, unanimously agreed that socio-economic development and population are closely inter related. The conference also acknowledged that though the world's population growth had reduced from 2.03% to 1.67% since 1971, the population of the developing

countries would continue to increase annually for a number of years. Implementation of effective family planning programmes and development of new contraceptive technology to combat the problem were some of the steps suggested at the conference. (See Table C)

Underemployment

India, being a democratic welfare society, is committed to provide jobs

Population Projections For World's Most Populous Nations (Table C)

(In millions)

Country	1980	2000	2025	2050	2100	Fertility Rate 1984
India	687.3	995	1,311	1,518	1,639	4.637
China	980.3	1,196	1,409	1,450	1,462	2.173
USSR	265.5	306	339	358	376	2.335
USA	226.5	259	286	288	289	1.846
Bangladesh	85.5	157	286	357	434	6.300
Pakistan	82.1	140	229	302	361	5.840
Japan	116.8	128	132	129	128	1.710
Nigeria	84.7	169	329	471	593	6.902
Brazil	121.3	181	243	270	299	3.816
Indonesia	146.3	212	284	332	358	4.214
Total World	4,435	6,145	8,297	9,778	10,889	3.526

Source: World Bank

for as many people as it can. Chronic overstaffing in most government departments and industries is the direct result of this. Overstaffing leads to under-employment and a nearly chaotic division of labour in the organisations. Together they lead to gross inefficiency. On the one hand, overstaffing means uneconomically obese wage bills and on the other, a sluggish and inefficient labour force. Jointly they have kept the public sector perennially in the red. The public sector, therefore, instead of leading the country to development has, over the years, become a crippling drain on our economy. And while we are saddled with an enormous unemployment problem we are also having to grapple with mounting under-employment.

To break the catch we would need to engage the existing idle capacity gainfully and check the seemingly uncontrollable expansion of the capacity. The problem is all the more daunting because of the adverse population-resource balance, which may lead to an Ethiopia-type situation (an economic syndrome where growth in numbers is checked by famine), and because of the great number of young people who will reach the reproductive age within the next few decades—for, in India, according to the 1981 census 40% of the population is below 14 years of age. These are also the very people who will, in the coming years, enter the maddening race for jobs, putting an unbearable pressure on the government. The government, however, is no magician who can create jobs in a jiffy which means that the sea of unemployed will swell with each passing year unless the population is controlled. The legion of unemployed will begin to live parasitically on the nation's dwindling resources pushing economy to the brink.

Therefore, it is necessary to attack population growth on a war footing to ease the pressure on jobs and to make the Indian economy competitive. And for this, two strategies should be simultaneously employed. The first involves stepping up of health care and family planning activities and the second, a dynamic thrust to educate the masses. India hasn't fared too badly on the first score which is reflected in the fall of fertility rate from 6.5% in the 1950s to 4.8% in 1982—though the initial "population momentum" has dulled its positive impact. But on the education front India has fumbled and faltered. Its record in this field continues to be one of the weakest among nations which began their march towards development in the late 40s. Yet a war on poverty without a ruthless attack on ignorance is quite meaningless. And education is the only means of curbing population growth.

In India, due to rampant illiteracy and

CURBING THE BABY BOOM

Rami Chhabra has carved a niche for herself on issues relating to family planning and women's liberation. She is the Programme Director of the Family Planning Foundation in New Delhi and is also a perceptive freelance journalist contributing regularly to national and international journals. In the following interview, Ramispeaks on problems of effective family planning implementation, female literacy and other aspects related to India's population problem. Excerpts from the interview:

Why is it that India, despite being the first country in the world to adopt a population policy aimed at lowering birth rates, has failed to achieve any significant result in controlling its population?

I wish I could tell you that. It must be noted that family planning does not come in isolation, but is intimately related to socio-economic development, which includes improvement in women's status, health and educational facilities combined with effective family planning services. The interesting question is why people who urgently need family planning are rejecting it. The answer is that for these sections of people, who subsist on low-income levels, a family planning programme has no relevance. More children for them means more work-hands and more income. Therefore, to understand the true nature of the problem we must perceive it from their point of view. However, with the requisite socio-economic development, these sections will accept the family planning policy provided there are better health and educational facilities, improvement in women's status, etc.

Family planning services will only be successful when an individual family's needs and society's needs correlate. Although there is general awareness favouring such a policy it now remains basically a question of effective implementation. The only way this can happen is by making certain innovations whereby such a policy is integrated into our general framework of living.

Although it is recognised that literacy, especially female literacy, is an important prerequisite of population control, India's record in this field is very poor. Why is this so?

Firstly, not enough has been done to recognise the real depth of the problem. Formal education is not relevant in the lives of rural women. These women hold the domestic economy on their shoulders and a young girl is needed in the house to take care of siblings, help in getting

water, food and fodder. Our priorities are very different from their needs.

Which sections are most receptive to family planning programmes?

Women from all sections are definitely the most receptive and constitute 90% of our programme—85% of our sterilisations are performed on women. Men, unfortunately, are extremely unresponsive and do not consider it to be their problem with only 10-15% going in for sterilisations. However, it is only when a woman gets exhausted by childbearing that she, as a life-saving measure, resorts to family planning. By then the demographic damage has already been done. In general one can say that the poorest are usually the most unresponsive to the family planning services as they feel they do not have a stake in the system.

What measures are taken to reduce the rate of infant mortality?

Firstly, the infant mortality rate has a definite influence on the fertility rate and vice versa. About 16m women are in the 16-19 age-group and the children born to these women are more likely to be still-born. Foetal infections may be the cause as these women are still not fully mature. It has also been established that an early child makes a mother prone to bearing more number of children. Again, a woman bearing her fourth or fifth child faces the danger of chronic health problems. The babies are usually undernourished and higher mortality rates occur. Therefore, if we can effectively reach these two categories—the teenage mother and the mother bearing her fourth child or more—the infant mortality rate and the fertility rate can be cut down to one-third. Prevention of child marriage is an important step in this direction and though legislation has been enacted, it is only by creating an environment where girls have options and are not mere commodities for exchange in marriage, that the problem can be solved.

What was the significant outcome of the United Nations Second International Conference on Population, held at Mexico City, in 1984?

A very important conclusion which was uncontroverted was that socio-economic development is an important criterion for successful family planning programmes.

What prospects do you foresee for India's population control programme?

Firstly, India's population will rise above 950m in the 21st century. There is nothing that can be done about it, as we have too much population momentum. After that whether the situation will stabilise will depend on prevailing attitudes. A.N.

widespread ignorance a large majority disbelieve that more children are hindrances to their economic interests because for them, it means more work hands. The phenomenon is best explained by the theory of "differential fertility", i.e., the general observation that birth control was first adopted by the better educated and the upper income groups. This theory is clearly active in India where the fertility rate is much lower in the urban areas, especially in the higher strata of the urban society, than in the rural areas. This suggests that people will, among other things, have to acquire a certain level of education and monetary security before they can accept the idea of a small family.

Demographic Transition

In the industrialised countries, the regular sequence of decline in death rates and birth rates led the modernisation theorists to postulate certain general propositions regarding the chain of demographic developments which have been called the "theory of demographic transition" or "theory of vital revolution." This theory traces a particular pattern in population growth. In the primary stage, a country having an agrarian low-income economy is characterised by high birth and death rates; in the successive stage, due to the effect of modernisation, the death rate declines because of higher levels of living and the introduction of public health facilities. However, as the birth rate is still relatively high, society experiences an accelerated population growth. In the final stage, due to the transition from an agrarian to an industrialised economy, with the acquisition of general literacy, urbanisation and improved standards of living, the birth rate also declines and there is controlled population growth.

In the light of the theory of demographic transition it can be seen that till around 1930 India was in the first stage. From 1950 onwards it entered the second stage though already there was a noticeable departure from the model. However, it was much later, when India was poised to enter the third stage, that things began to go awry. Today, despite considerable industrialisation—a symbol of the third stage—and a steep decline in death rates, we remain primarily an agrarian society. This shows that though death rates may decline, without the accompanying progress in the vistas of education and standards of living, there can be no guarantee that the economy will conform to the rest of the theory, with the birth rate showing a similar fall.

"High population growth rates have a negative effect on economic growth rates especially in developing countries," records the *Report Of World Development*

CENSUS INDIA

The practice of conducting census at a regular interval of 10 years began in Sweden in 1750. The US also conducted decennial census from 1790 onwards followed by France and England in 1800.

As for India, its current population problem, however, does not have an ancient origin. Historians have estimated that India's population remained more or less static through the ancient and medieval periods, the reason for this being the same as that which checked the growth of world population in the pre-industrial period; war and disease which led to a high death rate. The first census was taken in India in 1871 when the population count for 1867-1877 was 203.4m, and the figure was later adjusted to 255.2m. The study of the census data in the 20th century shows that although there was a slump in population growth between 1911 and 1921, since 1921 population has increased in every decade, the growth being phenomenal after 1951. From 1921 to 1971, population increased 118.1% and the growth rate for 1971-81, too showed an increase of 25% in the population. One reason for this increase is the rapid decline in the death rate which fell from 48.6 per thousand in 1911-21 to 19.0 per thousand in 1961-71. The expectation of life at birth, which was 18.1 years for males and 18.5 for females during 1911-21, rose to between 46 and 47 for males and between 44 and 45 for females during 1961-71. The birth

rate has not, however, declined correspondingly.

Population Growth In India (In millions)

	Population	Increase or Decrease	Percentage Increase or Decrease
1891	236		
1901	236	—0.0	— 0.0
1911	252	+16	+ 5.7
1921	251	—1	— 0.3
(1891-1921)		+15	+ 0.19
1931	279	+28	+11.0
1941	319	+40	+14.2
1951	361	+42	+13.3
(1921-1951)		+60	+1.22
1961	439	+78	+21.5
1971	548	+109	+24.8
1981	684	+136	+24.8
(1951-1981)		+323	+2.15

Source: Registrar General of India

As per the 1981 Census, India has 934 females to every 1,000 males. In 1901, there were 972 females to every 1,000 males, whereas in 1950 the figure decreased to 950. Urban population has grown from 9% to 23.31% in 1981. Around 39.7% of India's population is below 15 years of age and about 5.5% are over 60 years. The birth rate in 1981 was approximately 36 per thousand. S.B.

1984. In its simplest form this relationship denotes the effect of the rate of population growth on per capita income: more population means a larger denominator for estimating per capita income. But there is also the more significant plane at which the output itself is affected by the rate of population growth. This is essentially because of a reduction in savings for investment and diversion of larger amounts of resources to welfare and to indirectly productive investments such as health and education needed to support a shooting population. The Indian state has to sponsor and heavily subsidise these projects, not only because it is a welfare state, but also because, if some of these investments are withdrawn the speed and structure of economic expansion could be impaired by the resultant lower productivity of an uncared labour force.

The Food Crunch

Human nutrition is sharply divided between the two extremes of haves and have-nots. More than half of the world food output is gorged by the rich who consume less than 30% of mankind while the

70% poor are left to struggle and scramble for a helping from the remaining food output. In the poorer nations, between 1952 and 1971, the volume of food output barely kept up with the pace set by the tearaway population growth: it grew by 2.9% while the population rose by 2.6%. Even this small gain of 0.3% was inequitably distributed. Population control measures should be accompanied by a forceful drive to step up food production by modernisation of agriculture.

After the Green Revolution, India has steadily bolstered its food production and today, it is almost fully self-sufficient. But self-sufficiency is a deceptive phrase when applied to developing countries because food is more inveterately related to the quality of life than to its size. Human beings can survive on much less quantity of food than what is optimum. They can live, at least for limited periods of time, at the Malthusian level of bare subsistence, i.e., on a food supply just sufficient to sustain life. In India, one in every three persons lives under what is by itself a bare-bones-poverty-line of \$100 a year.

large number of Indians are eating much less than they should be. If, for instance, Indians in general were to consume even half as much food as their elite cousins in the US, India would have to import substantial quantities of food grains; even so India's achievements on the food front are not inconsiderable.

Since 1951 India has increased the area of land under cultivation by 20%, doubled the irrigated area and raised fertiliser use 10 times. The annual harvest of rice, corn and wheat has shot up by 105%, 265% and 340% (*Food And Population* by Roger Rovellet). Impressive as this performance is it may not be enough unless India can be satisfied with keeping over half its population constantly at the Malthusian levels. If not, then drastic steps will have to be initiated to keep the population pegged to controllable levels, and to further boost food production. For, the food crunch could be lurking around the corner and may hit the nation sooner than expected if urgent measures are not taken. India's population, even by conservative estimates, is slated to double itself in the next 45 years. India, therefore, has to brace itself to double its food output from the present level of around 600m tonnes to 1,200m tonnes by 2025 even if its aim is limited to maintaining nutrition levels at the present low state. If it aspires to feed every mouth with optimum quantities of food then the figure would be much higher. Though this is a difficult task it is probably not an impossible one if our past performance is any indication. In the 25 years between 1950 and 1975 food grain

production rose 10 times from 40m tonnes to 500m tonnes. By that count it should not be considered beyond India's reach to achieve the plus 1,200 tonnes target by 2025. All this is, of course, hinged on our ability to curtail population growth. Ecology

The earth is man's home. This is precisely what the word *eco* (logy) means; the word has its origin in the Greek word *oikos* (household or living place). Today, however, ecology is a house in disorder because man has become too big for his environment. Instead of being merely an organism living in an environment, as he was meant to, he is trying to force the environment to exist in the conditions he chooses to create. The disastrous result of this is becoming increasingly apparent with each passing day. The disproportionate growth of human population and man's indiscriminate destruction of his surroundings is creating a host of new and nameless problems every day.

Human population has expanded with a staggering rapidity since the turn of this century and projections for the future show that there is going to be no let up in this trend; but equally certain is the fact that the earth will not be able to support the multitudinous invasion of humans. If nothing kills man before it, the pestilence of pollution, which the geometrically growing population is sure to unleash, will get him. Thomas Malthus was one of the first to relate the destruction of man's environment to the increase in human population. He postulated that the earth cannot hold people beyond a certain num-

ber; there will be pestilence and famine to reduce the swarm of humanity. Though this theory is considerably old and is now considered outdated, his prophecy of mass-scale destruction as a consequence of overpopulation hasn't been proved wrong. Indeed what we are seeing around us today goes a long way to lend empirical substance to his premonitions. The overpopulated nations are often struck by cyclones, famines and natural calamities and myriads are killed. It may be nature's last resort to restore the equilibrium which is being eroded by an ever-growing population. This agreement stems from a simple logic explained by Milton H. Spencer, Professor of Economics, Wayne State University, "There is no doubt that the growth of population adds to pollution. This can perhaps best be appreciated from an engineering standpoint; just as an engine is not 100% efficient and hence creates waste as it transforms fuel inputs into energy outputs, so a population creates some waste as it transforms resource inputs into commodity outputs."

India is presently moving on a rapid path of industrialisation which is resulting in mass exodus from the villages to the cities. Our major cities are already dangerously polluted and with the additional strain of these daily migrations things can only worsen. If the population increases at the present rate, the unbearable pressure on arable land will relentlessly drive people citywards in search of jobs and we could be on the same path of self-destruction as any other country with similar problems. ■

POLITICS OF POPULATION

BY PROF C.P. BHAMBHRI

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All underdeveloped countries of Asia, Africa and Latin America are engaged in the eradication of poverty and many a time their efforts are thwarted because millions of children are born every year and they have to be provided with food, clothing and health services. While in the developed countries population growth has stabilised, in the poor countries the rate of increase in population almost negates the rate of growth in their economy. One important programme of governments in developing countries is to educate people about the small family norm. These governments are compelled to play a crucial role in family planning programmes because their voluntary agencies are weak and the level of education of the people is low.

During the last 38 years, the rate of population growth has made its dent on both the rural and urban areas in India.

A large number of unemployed and unskilled workers migrate from the rural to the urban areas in India, only to end up living in large slums.

Whenever the government is involved in any major social problem, political forces, for and against government policies, take up positions. Thus, even the population policy of the Indian Government has become politicised.

An important political debate in India regarding the population policy is centered around motivation and coercion in family planning programmes. While the government maintains that it is following a policy of motivation and providing incentives to the masses, many opposition parties and groups in India allege that the government is forcing people to go in for sterilisation.

At times, over-enthusiastic bureaucrats and family planning functionaries may be indulging in coercion to achieve their

targets, and this provides a handle to the critics of the government.

National Consensus

The success of family planning programmes depends on national consensus, but in India a division on this issue exists between the government and some of the opposition parties. The family planning policy cannot succeed without a large-scale educational programme; but often rumours are floated against the safety of sterilisation and propagation of birth control measures is rendered meaningless. Two major rumours are often circulated to influence the ignorant people. Firstly, that the family planning programme in India is directed against the poor—especially the scheduled castes and scheduled tribes. Secondly, that some religious communities are against family planning measures while other communities are accepting it, with the result that in future the religious composition of Indian population will change in favour of the minority communities. Thereby, the minority communities are growing in number because

(Continued on page 54)



The last voyage: The body of one of the 329 unfortunate crash victims.

KANISHKA FLIGHT 182 TO DEATH

Never before in the history of civil aviation has there been a worse air disaster over water as the one which occurred on the fateful day of Jun 23. The Air India Boeing 747, Kanishka, flying from Montreal to London, en route to Bombay and Delhi, crashed into the Atlantic Ocean, off the coast of Ireland, killing all the 329 passengers including the crew aboard. A catastrophe of this magnitude has a devastating impact in itself. But suspected sabotage has lent the disaster macabre dimensions.

For, minutes after the commander of the aircraft contacted Ireland's Shannon air control, the plane suddenly disappeared off the radar screen, plummeting into the ocean from an estimated height of 31,000 feet like a stone. What is most intriguing is the fact that the pilot did not have any time to radio a distress signal. Obviously, whatever it was that

DEATHS IN THE AIR

The recent Air India Boeing (Kanishka) crash in which 329 people including 77 children lost their lives, ranks third in the list of major air disasters. Prior to this the major five disasters which topped this tragic list were as follows:

- March 1977: 582 killed in a collision of two Boeing 747s (Pan Am and KLM) at the airport on Tenerife in Spain's Canary Islands.
- March 1974: 346 killed in the worst single-plane accident when a Turkish DC-10 crashed 26 miles north-east of Paris.
- Aug 19, 1990: 301 killed in a fiery emergency landing of a Saudi Arabian L-1011 jet at the airport in the Saudi capital of Riyadh.
- May 25, 1979: 273 killed when an American Airlines DC-10 crashed on take-off in Chicago.
- Sep 1, 1983: 269 killed when a KAL 747 was shot down after flying through Soviet airspace near Sakhalin islands by a Soviet fighter jet.

Apart from this, nine days in June '85—from June 14 to 23—proved to be particularly ominous for the aviation world. There were several hijackings and explosions which ultimately ended in a tragedy of unparalleled magnitude—the Air India Boeing crash on Jun 23. This one-day terrorist itinerary reads as follows:

- Jun 14: The hijacking of the Trans World Airlines (TWA) aircraft with 145 passengers and a crew of eight aboard on flight from Athens to Rome.
- Jun 19: In Frankfurt two children and an adult were killed when an explosion ripped through the passenger departure hall at Frankfurt airport.
- Jun 21: A Norwegian domestic flight was hijacked on flight from Trondheim to Oslo. The sole hijacker, however, gave up after releasing 115 passengers for beer.
- Jun 23: Baggage from a Canadian airliner exploded at Tokyo's Narita airport killing two baggage handlers and injuring four others.

caused the crash, whether a freak air turbulence, a technical fault or a bomb explosion, it was sudden, instantaneous and lethal. Because the Boeing 747 is system tested to cope with any eventualities including failure of all the four engines, in which case it can glide to land on sea. Also, the Kanishka was a relatively young Boeing with only 23,000 flying hours to its credit. And no matter what the severity of the emergency the pilot only has to trigger a button to signal distress.

That Capt H.S. Narendra piloting Kanishka had no time even for this clearly points out that he was taken totally unawares. The probability of some freak weather condition or technical fault can be eliminated for it is only after thorough checking that an aircraft is given the all-clear for takeoff. Which leaves the possibility of a sabotage only. All indicators point in the direction of this crash being master-minded by terrorists. And three terrorist groups namely the Dashmesh regiment, the All-India Sikh Students Federation and the Kashmir Liberation Army have even claimed responsibility for the crash. But what was heartening was the fact that the majority of the Sikhs also came out with open condemnation of the alleged dastardly act.

Recently terrorism has scaled a new high in India. The recent, perfectly synchronised bomb blasts which rocked Delhi and parts of North India hinted at an organised terrorist network. The blasting of Kanishka is a positive indicator. That the ill-fated Air India flight originated in Canada only strengthens this view, for Canada has made no secret of its extremely liberal policy towards terrorists. Not only Canada but the US, too, has flourishing commercial terrorist training schools imparting knowledge of arms, explosives and terror tactics to their students. It is suspected that two such trained terrorists, Lal Singh and Ammand Singh, wanted by the FBI for their alleged involvement in the plot to assassinate PM Rajiv Gandhi on his US tour, may have a hand in the blowing up of the Boeing. And an international search for these absconding terrorists is on.

Another pointer to the plane crash being a case of sabotage was the baggage blast at Japan's Narita airport, only 44 minutes prior to the Boeing tragedy, in which two people were killed. The Canadian Pacific Air Boeing 747 carrying 400 people, in which the baggage was being carried, landed at Narita airport 15 minutes before schedule because of favourable tail winds. What could have happened had the plane not landed when it did, is too fearsome to contemplate. And what is more shocking is the fact that the suitcase which exploded was among the baggage scheduled to be transferred to another Air India flight which was due to leave Tokyo for Bombay. Apparently the terrorists had been aiming at blowing up two Air India Boeings to intensify the shattering impact and create more panic in the world at large and India in particular.

Meanwhile massive rescue operations have been launched by the British, Irish, Canadian and American authorities. The Atlantic Ocean is being scoured for bodies and remnants of the aircraft. Investigations are trying to decipher the exact cause of the crash on the basis of evidence obtained from the wreckage and the mutilation of the bodies. A report from the 131 bodies recovered so far that death occurred long before the bodies touched the water. The pressure inside an aircraft is maintained at 760 mm while that outside at the height of 30,000 feet is about one-third—at 225 mm. In the event of the aircraft experiencing a hole being formed the air would have been sucked out of the aircraft at such speed that it would have resulted in an explosion. It could also have caused the bursting of the lungs rendering the passengers unconscious. Further, free fall from 31,000 feet which may have lasted approximately 55 seconds, would have, according to doctors, caused the rupturing of blood vessels in the brain and were the passengers not under pressure may have resulted in the cessation of blood flow to the brain. And according to the latest report of medical experts, even if the bodies and the bodies recovered, death occurred within half a minute of the tremendous suction of air from the rear to the front of the aircraft. So great was the suction and so great its force that the passengers were held their heads against the front seats.

The recovery of the black box, marks the beginning of the end for the rescue teams, will perhaps help to solve the mystery of the crash. The black box was recovered in two stages. First, the cockpit voice recorder (CVR) was located and picked up. Then the flight data recorder (FDR) was located and picked up. The CVR was found in the water and the FDR was found on the beach.

BLACK BOX COMES TO LIGHT



Hopes of investigators probing the disastrous Boeing air crash that killed 329 people, are sealed in the black box. For an instrument of such vital importance surprisingly little is known about the black box. The black box—18 inches long and nine inches wide—is a sturdy package of two recording instruments namely the Flight Data Recorder (FDR) and the Cockpit Voice Recorder (CVR). The black box, so called because it is a repository of information that it will divulge only on compulsion, quite in contrast to what its name suggests, is not black but orange in colour. Its casing is made of a special alloy of metals which makes it quite heavy. The black box is designed to survive under the most adverse conditions and is shockproof and water and fire resilient. Apart from this the box is lodged securely in a special protective enclosure in the rear of the aircraft where there is less likelihood of its being destroyed.

The recorders in the black box are invaluable for restructuring the sequence of events occurring in the cockpit of the aircraft. The 4C pound FDR records the functioning of the aircraft, its engines and other instruments with the help of computers. Information regarding the height of the aircraft, its speed, direction, angle of flight, working of various instruments can all be obtained from the FDR. The CVR weighing 21 pounds, records all conversations taking place in the cockpit for a duration of 30 minutes at a time. After this duration the past half hour's conversation is automatically wiped off and in its place that of the next 30 minutes is recorded. This includes the pilot's communication with the ground control tower, and with the pilot of any other aircraft flying in the vicinity.

In case of a plane crash the black box can be traced owing to the signals it starts emitting once it is dislodged from its mounting. These signals being of a specific frequency can be detected with the help of special detecting equipment only. And that, too, upto a distance of 12,000 feet. The power source of the black box remains active for about a month and if the code is known it can be traced with the help of sonar receptors.

Given its functions the role of the black box in the Kanishka crash can be easily appreciated. Since the flight path and the functions of all the vital organs of the aircraft for the entire duration of the flight and during the final moments before it plunged into the water will be revealed, any mechanical defect, which might have caused the accident, could be ascertained. The CVR's recordings of in-cockpit conversations can tell the investigators whether the crew suspected mechanical malfunctioning at any moment of the flight. The cumulative information provided by the FDR and the CVR should be sufficient to accurately and definitely derive the reason for the accident.

recovery of the flight data recorder (FDR). The hunt for the crucial black box had lately been intensified with robots joining the search parties. And ultimately it was *Scorabl*, an unmanned submersible robot, which performed the miraculous feat of retrieving the invaluable piece of evidence from a depth of 6,700 feet. Never before has an object been recovered from such a great depth.

Experts have cautioned against placing too many hopes on the black box either. For there is a likelihood that the recorders may not have been able to record anything in the case of a massive electrical failure. The black box has been brought to India for analysis—precaution against tampering by foreign authorities. It now remains to be seen what exactly will be revealed by the black box to ascertain the causes of the Air India tragedy. For, the dead can't tell!

SPECTACULAR DEBUT

"We hit it off" was US President Reagan's summation of PM Rajiv Gandhi's four-day state visit to the US. An appropriate assessment that, for, seldom has a visiting head of state generated quite so much curiosity and interest in America. And never before has one made so spectacular a debut on the Washington stage as India's young PM. Not only did he take the US by storm—he virtually bowled the Americans over.

Perhaps for the first time in the history of Indo-US relations both sides laid their cards on the table. Rajiv made it very clear that India was not prepared "to be tied to the apron strings of any major power", reaffirming its commitment to non-alignment. And for once the US accorded due respect to this commitment. Neither did the Indian PM exhibit any undue reverence for one of the world's greatest superpowers. The message was clear: India is a self-reliant country which will not be cowed down by Pentagon's dictates.

Rajiv did not hesitate to voice his criticism against US policies. He openly opposed Reagan's pet project—the Strategic Defence Initiative or the Star Wars programme which proposes the induction of weapons into space capable of deflecting a nuclear attack. According to the Indian PM, this programme would lend a totally new dimension to the arms race and would result in militarisation of outer space. On the issue of the US supply of arms to Pakistan, always a sore spot in Indo-US relations, Rajiv was quick to point out that India had no fear of Pak acquisition of additional arms. The implication was evident—India was fully equipped to cope with any eventuality. However, Rajiv's main reason for opposing America's continued military assistance to Pakistan was that it was forcing India to divert precious resources from economic development to stockpiling of arms.

But what perhaps delighted Washington the most was Rajiv's stand on the highly sensitive Afghanistan issue. He went all out against Soviet intervention and reiterated India's unequivocal support of a neutral non-aligned government in Kabul free from all interference. Further, he went on to declare that he favoured "a political settlement in Afghanistan that insures sovereignty, integrity, independence and non-aligned status and enables the refugees to return to their homes in safety and honour"—opposing, in the same breath, both external intervention of the Soviets as well as external pressures exerted collectively by Pakistan and the US. With regard to the nuclear Non-Proliferation Treaty (NPT) the Indian PM maintained his stand. He refused to even consider a treaty, which, according to him, was "blatantly unfair" in its discrimination of non-nuclear countries.

One would have expected the US to view Rajiv's adverse approach on so many issues with a certain amount of irritation. But quite contrary to this the US maintained a cordial attitude and gave India a fair hearing. The Reagan-Rajiv talks were "a smash hit". Said Reagan: "India and the US have just begun to write the history of our relations." Implying that as far as Washington was concerned, the slate of its blow hot-blow cold relations with New Delhi had been wiped clear of all past misunderstandings and it was eager to start anew on a warm note. The wide-ranging talks between the two leaders covered bilateral issues. The joint statement issued at the end of Rajiv's visit hinted at the expansion of bilateral trade and technological collaboration and envisaged the probability of exchange of visits by high-level trade and investment missions in the near future. Also, encouraged by the success of scientific and technological collaborations already agreed upon by the two nations, two new steps were suggested to further enhance their performance. The first was an action programme to develop and produce new improved vaccines against major commercial diseases. And the second was a long term research and development programme covering activities in fields like agriculture and forestry, health and nutrition, family welfare, biomedical research, industrial research and development. No headway was made on the issue of arms purchase, for the US laid down certain clauses unacceptable to India.

Apart from this, Rajiv also inaugurated the 18-month Festival of India in the US in an attempt to promote American interest in Indian culture. A jointly-financed \$12m venture, the festival will include exhibitions, musical performances, educational and scientific seminars in 90 American cities in 45 of the 50 states of the US. As Reagan remarked: "It is the year of India" in the US.

Rajiv presented a totally different image of India to America. And by his personal charisma, candour, wit and frankness impressed the hard-to-please benchers of the Congress and media. His visit was a resounding

that Rajiv Gandhi's visit to the United States, which was accorded to any visiting dignitary, could dampen its impact. Analysing his trip PM Rajiv Gandhi said: "Although we look at the world from different perspectives we feel we can cooperate to reduce the differences and work together for the ideals we hold in common."

On his way back to India on the last leg of his six-nation tour Rajiv addressed the 71st session of the International Labour Organisation (ILO), during his brief stop over in Geneva. Rajiv returned with a highly optimistic Reagan-prediction reverberating in his ears—"Just as with relations between our two countries I predict good things ahead."

GUJARAT

CHANGE FOR THE BETTER?

The enflamed passions of the agitationists have reduced Gujarat into a burning state. Lawlessness has become so inherent a part of life in the state that even the presence of security troops and armed forces has done nothing to quell the rampant vandalism. No longer are infuriated mobs content with burning houses and vehicles. Their macabre activities now include the burning of innocent people as well.

Ever since the call for the Gujarat bandh on Jun 7, matters have progressively worsened. Violence has escalated especially in the walled city of Ahmedabad and Baroda. This, despite the clamping of curfew in potentially volatile localities. In Dariapur, the epicentre of the recent violent upheavals, a family of eight was burnt alive while nine people were shot dead. All over the state the death toll has reached alarming proportions.

On Jun 20 the Rathayatra procession went through Ahmedabad in blatant defiance of police orders banning the religious procession in the wake of communal disturbances. This resulted in outbreak of violence in the walled city in which at least seven people were killed and many injured. Meanwhile, no headway has been made with the striking employees either. And to add to the already long list of strikers, the 14,000 nurses of the state have also threatened to go on strike to protest against the caste-based roster system.

Keeping the progressively worsening state of affairs in Gujarat in mind, the Centre after much deliberation decided to remove the controversial CM Madhavsingh Solanki. In a much-delayed overture towards restoring normalcy in the state that had long since been clamouring for Solanki's removal. His exit is expected to pacify the anti-reservationists too, to some extent, for they hold him entirely responsible for initiating the anti-reservation agitation by announcing an 18% increase in reservations quota for backward classes prior to the elections this year. This is the second time in Gujarat's history that a CM has been forced to step down. The first was Chiman Patel who resigned in 1974 following the Nav Nirman movement. And now it is Madhavsingh Solanki.

Solanki's resignation elicited a jubilant response from people of riot-ravaged Gujarat. And was accompanied by festivities and celebrations. The office vacated by Solanki was filled in by a member of the Solanki ranks—Amarsingh Chaudhary, A known supporter of the outgoing CM. Chaudhary was unanimously elected leader of the Gujarat Congress legislative party. In fact, Solanki himself had recommended him for the post. Chaudhary was sworn into office by Governor B.K. Nehru. Continuing in the Solanki tradition, the new CM inducted members of the Solanki ministry in his newly formed cabinet which already consists of seven cabinet ministers and three state ministers. There are, however, four new faces among these. They are Babubhai Sopariwala and Amarsingh Wagela of Cabinet rank and Hasamukh Patel and Sushila Seth as ministers of state.

The Centre has thus taken a major step towards resolving the festering Gujarat problem notwithstanding the repercussions its decision may have in the Congress party in Gujarat as well as other states. It is now upto Amarsingh Chaudhary to live up to the trust the Centre has vested in him.

PUNJAB

ASSESSING THE SITUATION

The All India Sikh Students Federation (AISSF) has become the aggressive youth wing of Baba Joginder Singh's United Akali Dal. Its recent hostile demonstrations against the Longowal-Badli-Tohra trio have contributed to deepening the cleavage between the various factions of the Akali Dal. The open confrontations between the Baba's supporters on the one hand and Longowal supporters on the other, apart from posing a threat to panthic unity has grave connotations for the Centre as well. For, the President's rule, imposed in the

state is enabling its keenness to restore popular government rule in Punjab before that.

Therefore, the escalation of the panthic power wars does not augur well for the Centre's plans because the much-delayed Assembly and Lok Sabha elections in the strife-torn state can only be held with the full support and cooperation of the Akalis who have a large following in Punjab.

At present, however, no favourable indications are being received from the Akali leadership. SGPC President, Gurcharan Singh Tohra, is sticking to his guns, unwilling to relent an inch in the government's favour. Neither is he willing to consider the idea of having talks with the Centre. In fact the SGPC has even gone to the extent of serving a notice on the Union Government and the government of Punjab under Sec 80 of the Civil Procedure Code demanding Rs 1,000 crores as compensation for the loss of material in the Golden Temple complex and other gurdwaras in the state, in last year's Operation Bluestar.

To make matters worse, the Punjab Pradesh Congress Committee chief, Santokh Singh Randhawa, in a startling political development, resigned from office. Apparently as a protest against allegations levelled against him of his suspected links with terrorists.

The Centre, seemingly unperturbed by such disturbing developments, has once again made a gesture of goodwill. Already more than 300 Sikh youths arrested recently have been released. All of them have not been involved in offences of sedition, murder, dacoity or arson. For the time being the Centre's eyes are focussed on Punjab to assess the situation before it gives the green signal for elections in an attempt to revive the constitutional process and pave the way for restoration of normalcy.

INDO-SRI LANKA RELATIONS

CALLING A TRUCE

The talks between PM Rajiv Gandhi and the Sri Lankan President Jayewardene may well prove to be the first step towards the ultimate resolution of the island nation's ethnic problem. A Sri Lankan delegation headed by Hector Jayewardene, brother of the President, was in New Delhi in accordance with the proposal for an expert level meeting between the two countries which was agreed upon by the two leaders. The delegation had discussions with Indian constitutional experts which reportedly touched on amendments to the Sri Lankan Constitution to suitably accommodate certain demands of the Sri Lankan Tamils for greater autonomy for their provinces.

The step indicates an attempt by the Jayewardene Government to find maximum acceptability among all political parties in Sri Lanka for the proposed reforms. Obviously ex-PM Bandaranaike's criticism of Jayewardene's tactics is responsible for such a seemingly placatory move.

Then, even as violence continued to rock the island nation as did the atrocities on Tamils, the Sri Lankan government made a startling announcement only a day after 100 Tamil rebels were reportedly killed or injured by the security forces. It announced that it had reached an agreement with the major Tamil separatist groups on the cessation of hostile acts. Said Defence Minister Lalith Athulathmudali, "There appears to be a point that has been reached today when we can confidently look forward to a cessation of hostile acts, as from today, in order to create an atmosphere for resumption of dialogue for a political settlement."

But, apparently, the announcement was made without the consent of Tamil militant groups. For, the Tamil guerillas of the Liberation Tigers of Tamil Eelam promptly asserted that their final decision to observe cessation of hostilities would depend on the implementation of proposed conditions. The Tamils are willing to call a truce only if the government accedes to their demands which include the lifting of prohibition and surveillance zones and other regulations prohibiting movement of people in affected areas; withdrawal of Sri Lankan armed forces from Tamil areas; the release of political detainees; cessation of all acts of illegal arrests; dismantling of state-wide Sinhala settlements and an international inquiry into all acts of atrocities on Tamils by the Sri Lankan army. Further, the Eelam National Liberation Front consisting of the major Tamil separatist groups has also declared its intention of boycotting the proposed peace talks which the Sri Lankan government is planning to hold with the Tamils at Thimpu in an attempt to end the ethnic crisis. The Tamil guerillas have also made it implicitly clear that cessation of hostilities does not entail laying down arms or giving up their armed revolutionary struggle. With this ominous pronouncement the Tamil militants have added a subtle warning. Accord-

ing to them the temporary cesses. It is hoped that the Sri Lankan government should fulfil all the preconditions. With both the Sri Lankan government and the Tamils unsure of each other's bonafides it is only to be hoped that the truce is not called off.

INDIA-PAKISTAN

HESITANT OVERTURES

The three-day ministerial meeting of the Indo-Pakistan joint commission held in New Delhi in the first week of July ended on a moderately optimistic note. Coming in the wake of Rajiv's anti-Pakistan stance during his recent tour of the US, it is a welcome development indeed. For one would have thought Pakistan would adopt an even more uncompromising attitude towards India. Washington may well be indirectly responsible for Islamabad's friendly overtures.

Pakistan's Foreign Minister Sahabzada Yakub Khan who was heading the delegation had talks with PM Rajiv Gandhi covering a wide range of subjects including bilateral, regional and global issues. The high point of the Pakistan delegation's visit was the signing of an agreement on cooperation in the field of agricultural research and development. The agreement provides for an exchange of scientists and technologists, holding of seminars and workshops of scientific equipment. Programmes of common interest are also envisaged. Apart from this the agreement also includes exchange of scientific literature, information and methodologies and publication of research findings. Also, an additional linkage will be established to facilitate advancement of the objectives of the agreement. A joint follow-up committee will also be set up which will meet once a year, alternately in both the capitals, to see the proper execution of the project.

Besides the agreement, the two countries have also agreed to promote travel and tourism and make travel by businessmen and transit visa holders easier. The meeting finalised a cultural agreement and formulated a cultural exchange programme. Steps have also been taken to make railway travel between the two countries convenient. A coaxial cable linking India and Pakistan to be commissioned in August will provide additional telecommunication facilities. There will also be an exchange of radio and TV programmes.

Major cities in the two countries will henceforth have direct telephone links. At present there is a direct link between Delhi and Islamabad only. With regard to the issue of narcotics smuggling across the Indo-Pak border the two sides identified organisations which would cooperate in checking this menace.

However, India and Pakistan once again failed to reconcile their differences in the crucial trade sector barring an indication that Pakistan would increase its off-take of iron-ore from India. Pakistan declined India's offer of wheat stating that it had already made arrangements for supply of wheat from the US and Australia. It also refused to open trade to private agencies in Pakistan on the pretext that it would hit its domestic industry. It even refused to have a new trade agreement with India. Obviously Pakistan gives extremely low priority to trade with India and in this respect has a decidedly discriminatory approach as far as India is concerned.

The ministerial meeting did not discuss important issues such as the Pakistani offer of a no-war pact or India's suggestion for a more comprehensive treaty of peace and friendship which will feature in the foreign secretaries meet scheduled for the end of this month. And if the just concluded meeting is anything to go by one can look forward to the forthcoming talks with cautious optimism.

STATE OVERDRAFTS CURB ON STATE-AID

In a bid to inject financial discipline into the country's economic structure, the Centre has decided to abolish the facility of overdrafts available to states. All but 10% of the overdrafts of various states will be converted into medium-term loans payable over four years with an interest of 8% per annum. Jan 28, 1985 has been taken as the cut-off point for determining the conversion of overdrafts into loans.

The total overdrafts on Jan 28 this year had peaked to a staggering Rs 1,808 crores. However, responding to frantic pleas by the Centre the states controlled their overdraft condition bringing down the level to Rs 932 crores by Jun 26. And, according to the Centre, it was persistent requests by the various states to convert overdrafts as on Jan 28 to medium term loans and their assistance in bringing down their overdrafts

which had been also a factor in the decision to implement the conversion scheme on the basis of the Jan 28 level as otherwise states which had considerably lowered their overdrafts level would suffer from lack of adequate funds for development.

The Centre, at the moment, is contemplating the introduction of a consignment tax over and above the sales tax as demanded by the states for raising additional resources. Furthermore, the Centre has impressed upon the states that outlay on priority sector earmarked by the Planning Commission should be strictly adhered to, for a shortfall in expenditure due to diversion of funds in priority sectors would result in a corresponding reduction in Central assistance for state plans.

The Centre has also asked the states to raise additional resources and effect economies in the non-Plan expenditure. And this requires improving the performance of the state electricity boards and road transport corporations which are presently a big drain on the resources of states. In fact, the additional resource mobilisation which some states had managed to achieve has also been eroded by the losses incurred by the state electricity boards and road transport corporations.

Meanwhile, the states on their part have attributed various reasons for their deteriorating financial resources. Among these is their obligation to pay additional DA instalments in line with the Central pattern. Also, the revision of the salary scales of the staff has led to increased non-Plan expenditure. But this excess expenditure should, according to the Centre's reasoning, be met through improved collections and buoyancy in revenues.

The Centre is in the process of formulating its long term fiscal policy. And the reaction of the states to the abolition of overdrafts will undoubtedly play a vital part in ascertaining the nature of the policy.

IRDP

IMPROVING THE STANDARDS

The Programme Evaluation Organisation (PEO) of the Planning Commission conducted an evaluation of the Integrated Rural Development Programme (IRDP) which has shed light on its working. The evaluation has revealed that 49.4% of the beneficiaries covered by the study had crossed the poverty line with an annual income level of Rs 3,500. And this, in spite of the fact that the average amount of financial assistance provided per scheme was considerably lower than the permissible maximum coupled with delay in building up the organisational set up as also shortfall in formulation of annual plans, the existing gaps in infrastructural and supporting facilities and the conspicuous absence of technically sound benefit schemes.

This IRDP study conducted in 1983-84 was confined to 132 villages of 16 states covering 1,170 households. Eighty-eight percent of these households registered increased incomes while 37% registered an increase in family assets, and 77% reported increase in consumption level. The study also revealed that 26% of the sample households were already above the poverty line (that is in terms of the norm of annual income of Rs 3,500 laid down for identification of beneficiaries) and therefore did not qualify for provision of benefits under the IRDP. However, 30% of the beneficiaries were in the Rs 2,500-3,500 annual income group, 29% in the annual income group of Rs 1,500-2,500 while below 15% were well below the poverty line with a meagre annual income of Rs 1,500 and below.

The IRDP study also disclosed that 75% of the selected beneficiaries were provided with benefit schemes pertaining to activities in the private sector. Then, 17% of the sample households were provided with benefit schemes in the tertiary sector while only 8% received secondary sector schemes. Almost 70% of the sample households received financial assistance to the tune of Rs 3,000. And among those, 19% got only up to Rs 1,000 while 14% received Rs 5,000 and above.

With regard to overdues, over 41% of the 1,170 households reported overdues in respect of the loans advanced to them and while 9% had made repayment ranging from 20-40% of the loan amount, 26% had made repayments of 40-60% and 17% had made repayments to the extent of 60-80% of the loan amount.

However, only 28% repaid their loans to the extent of 80-100%. In all probability the overdues resulted from inadequate returns from schemes and unforeseen expenditure. Keeping this in view it has been suggested that physical targets in future, as regards coverage of beneficiaries under IRDP, should be fixed giving due consideration to level of development and economic conditions prevailing in the par-

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USSR

GROMYKO AT THE HELM

Foreign Minister Andrei Gromyko was unanimously elected President of the Soviet Union by 1,500 deputies of the Supreme Soviet after his name was proposed by General Secretary Mikhail Gorbachov. This development signified a departure from the normal Kremlin tradition where the party leader also assumes the post of chief of state. Ever since Leonid Brezhnev initiated the policy of being party leader and also assuming charge of the presidency in 1977, this policy was consistently followed by both his successors—Andropov and Chernenko. The break of practice by Gorbachov of not taking on the presidency has been viewed as a sign that he has consolidated his position sufficiently and feels confident enough of sharing power without diminishing his authority in any way. Gromyko's recent elevation has relieved him of the posts of first deputy PM which he assumed under Andropov and the post of foreign minister which he has continuously held since 1957 when Khrushchev appointed him.

Gromyko's vacancy has been filled by Eduard Shervardnadze, the Communist party chief from the Republic of Georgia, who was hurriedly elected to the Politburo. His relative inexperience in the area of foreign affairs has been taken to mean that Gorbachov will basically be his own foreign minister.

In the present Kremlin triumvirate Nikolai Tikhonov remains PM or Head of Government which is the third branch of the Soviet power structure. The exit of Grigory Romanov from the ruling Politburo is another indication that Gorbachov has played his cards well. Romanov, a one-time power contender and rival of Gorbachov, was removed on "health grounds" and evidently at his own request.

TWA HIJACKING

LEBANESE SHI'ITES STRIKE AGAIN

Beirut became the centrepiece of another high-pitch drama, though this time it had its origins in the air. On Jun 14, the Boeing 727 American airliner, TWA Flight 847, which was flying from Cairo to Rome with a stopover in Athens was hijacked from Athens by two Shi'ite Muslim terrorists identified as members of the Islamic Jihad, and the pilot was forced to fly to Beirut. Though initially Beirut airport authorities refused the plane permission to land, they were forced to relent as the hijackers threatened to blow up the aircraft. After refuelling at Beirut airport, the plane took off for Algiers where permission to land was again denied by airport authorities though a special request from President Reagan to the Algerian President Chadli Benjedid made them change their minds, and after a brief stopover of five hours in which more passengers were released, the plane once again headed for Beirut.

To show that the hijackers meant business, an American believed to be a marine was shot by them and his body was thrown out of the aircraft. Again after refuelling and replenishing food stocks, the plane took off from Beirut to Algiers where 49 passengers were released before the aircraft took off for Beirut once again.

Negotiations between the hijackers and the American authorities were conducted by Nabih Berri, the Shi'ite Muslim leader and present Minister of Justice in the Gemayel Government. The major demand of the hijackers was the release of 735 Lebanese prisoners held in Israeli jails, of which more than 600 are believed to be Shi'ite Muslims. Other demands included the immediate withdrawal of Israel from southern Lebanon and international denouncing of the US and Israel. The situation ultimately developed into a back-to-back standoff between Lebanon's Shi'ite Amal militia, the US and Israel. The stalemate was aggravated because the hijackers had the sympathy of the Shia Muslims in Lebanon. About a week after the hijack drama began, hundreds of Shi'ite Muslims chanting "Death to America" and hailing the hijackers as "heroes of Islam" demonstrated at Beirut airport. Further, the Lebanese who disapproved of the hijacking, like Nabih Berri, approved of the objective of the hijacking—the release of the 735 Lebanese prisoners. Nabih Berri, for instance regarded the hijackers' demand as a quid pro quo offer rather than blackmail. His argument was that the Israelis had transported the Shi'ites from the Anser prison camp in south Lebanon into jails inside Israel on their withdrawal from the Sidon region earlier

this year and had thus violated international norms. The International Committee of the Red Cross (ICRC) had, in fact, ruled in April that the transfer went against the 1949 Geneva Convention on the conduct of war to which Israel is a signatory. The Shi'ite leader felt that there was no difference between kidnapping in the sky and on the ground and accused Israel of "keeping 700 people without any right".

On the other hand, the US did not want to bend to international terrorism and President Reagan declared at a press conference that making concessions to the hijackers would only invite more terrorism. The US even considered imposing economic sanctions on Lebanon which further angered the Lebanese.

To present another twist to the tense drama, the passengers of the hijacked TWA plane were removed to secret hideouts. Israel, in the hope of finding a solution, hurriedly released 31 prisoners, though mediator Berri declared that the American hostages would not be set free until the remaining Lebanese prisoners were also released. Berri, as head of the Muslim Amal militia also added that the US should withdraw its warships from the eastern Mediterranean if it wanted the release of the 39 American hostages. Offers to transfer the hostages to Syria or to a Western embassy in Beirut were also made by Berri and the French government indicated its willingness to accept custody of the 39 hostages for two days if Israel agreed to transfer the prisoners within that time.

Negotiations, however, proved to be fruitful. Following Israel's promise to release the remaining 735 Lebanese prisoners and guarantees from the US that it would not retaliate against the incident, the 39 American hostages were released bringing an end to the 17-day suspense-filled drama. The American passengers were flown to Frankfurt from Damascus and then back to the US. Israel freed 300 prisoners and stated that the remaining would soon be released.

The hijacking of the TWA aircraft was the third to occur within three days in the region and the second to be engineered by the Lebanese Shi'ites. The first hijacking involved half a dozen Shi'ites who stormed aboard a Jordanian-owned Boeing 727 at Beirut airport. The terrorists were unhappy about an Arab League statement supporting the cause of Palestinians in the Beirut refugee camps which have been under Lebanese Shi'ites' attack for the past few weeks. They later freed the passengers and blew up the plane. Several of the freed passengers boarded the first flight out of Beirut, which was a Middle East Airlines flight to Cyprus. This, in turn, was hijacked by a Palestinian who threatened to blow up the plane in protest against the earlier Shiite hijacking. He, however, surrendered after being granted a request to fly to Amman aboard a Jordanian airliner.

MIDDLE EAST

NEGOTIATING FOR PEACE

With the radical camp in disarray, the more moderate in the Middle Eastern stalemate began to look toward a peace in June. Proposals for the settlement of the Arab-Israeli/Palestinian issue were first made by Jordan's King Hussein who visited Washington after talks with the Palestine Liberation Organisation's Yasser Arafat. He affirmed that he and the moderate Palestinians were interested in negotiations with Israel for a peaceful settlement on the basis of the pertinent UN Resolutions, including 242 and 338. Since the US and Israel do not want an international conference which may give the Soviet Union a formal role in Middle East talks, and they do not want to deal with the PLO directly, Hussein suggested negotiations under an international 'umbrella', which implies that Israel and the Arabs would meet face to face under the guidance of the permanent members of the UN Security Council.

The US did not dismiss the 'umbrella' plan, but set some pre-conditions including the establishment of full diplomatic relations between Israel and the Soviet Union, and the reduction of the flow of arms to Iran and Lebanon by the latter. The US Secretary of State, George Shultz, wrote to the Israeli PM Shimon Peres, saying that since the US believed that Jordan was committed to talking directly with Israel, he hoped that Israel would back US efforts in that direction. He suggested Peres on an exploratory meeting between a US delegation and Jordanians and Palestinians who are not members of the PLO. He also pointed out that the US would deal directly with the PLO only if it made

a fortnight public statement of its support for the PLO's recognition and of its recognition of Israel.

Although Israel was sceptical about Arab intentions, it has a five-point plan of its own envisaging, first, informal talks between the US, Israel, Jordan and non-PLO Palestinians. A Jordanian-Israeli-Palestinian committee would then draw up an agenda for a conference in which the US would take part. Instead of the international conference with Soviet participation which Jordan has called for, the Israelis say that direct negotiations between them and a Jordanian-Palestinian team should be backed by the Security Council's permanent members but 'without pre-committing themselves to support the stand one of the sides takes'. Jordan and Arafat's PLO quickly rejected the Israeli proposals.

However, the pace has been set although the obstacles are many. The US has moved to give some concrete support to Jordan. After four years of delay, the State Department submitted for the President's approval a proposal to supply Jordan with \$250m to \$300m in economic aid. Furthermore, the main stumbling block has so far been the desire for an independent Palestinian entity in the West Bank and Gaza strip. Recently, however, Jordan's Foreign Minister, Taher el Masri, said in Washington that the Jordanian-Palestinian 'confederation' that Hussein and Arafat have in mind "means that there will be no independent Palestinian state."

IRAN-IRAQ

WAR-WEARY

In the latest round of the four-and-a-half year Iran-Iraq war, Iran claimed that Iraq missile attacks on 14 Iranian towns and cities had left 78 Iranians dead and 326 injured. Further air raids launched by Iraq were directed against another 12 Iranian towns leading to a further escalation of the Gulf crisis. Iran, meanwhile launched a major offensive on Iraq's southern Howzeah marshes, occupying an additional 150 sq km of Iraqi territory and killing more than 100 Iraqi soldiers. In another attack, Iran claimed that it had killed or wounded around 250 Iraqi soldiers near the Iraqi city of Qasr-Shirin, 170 kms from Baghdad.

The war which has displayed signs of wearing down both sides, is claiming a heavier toll in the case of Iran. The continuous bombardment of Teheran due to repeated Iraqi air raids has led to tremendous feelings of insecurity in the city with Iranians fleeing to the countryside at night to escape the bomb attacks. Iran's air force has proved no match for Iraq's superior air power. Inflation and economic scarcity have also added to the misery of the people. Several anti-war demonstrations were quickly suppressed by the Iranian authorities and in retaliation two major pro-war rallies were organised in Teheran to demonstrate support for government policies.

Iran's over-all war weariness has even forced Ayatollah Khomeini to calm his rhetoric, as in a recent speech he said, "We will cut off the hand of the aggressor if we can."

AFGHANISTAN

SOVIETS DISGRUNTLED

The mujahideen resistance guerrillas are reported holding between 50 and 200 Soviet prisoners inside Afghanistan. However, the death of 12 Soviet prisoners in blasts at a refugee camp near Peshawar proved that they are being held in Pakistan as well and this has led to an all-time low in Soviet-Pak relations. In fact, the Russians allege that the Soviet prisoners were killed by regular Pakistani troops when they took over a mujahideen ammunition dump in an escape bid from the Zangali refugee camp. The Pakistanis claimed that there were no Soviet prisoners being held on Pakistani soil and rejected the Russian allegations. The incident, however, was embarrassing because Pakistan does not officially admit to having any Afghan resistance fighters on its soil and says that it only gives humanitarian aid to Afghan refugees.

Shortly afterwards, Soviet forces in Afghanistan broke the 11-month-old siege of the garrison town of Barikot in the Kunar valley, which runs parallel to the Pakistan border, northwest of Peshawar. Analysts feel that the Soviet action in Kunar is directly linked with the Soviet objective of sealing the Afghan border with Pakistan. It is felt in Western diplomatic circles that the Soviets intend to bring in a brigade with about 3,000 soldiers into the area. They have already established five military posts in the area with 100 men to each ward. Although ostensibly the Soviet intention is to seal off infiltration routes south of Barikot, Pakistani officials feel that the action in Kunar is aimed at them as much as at the mujahideen. During the 11-month siege of the town, Afghan aircraft which took part with the Soviets in the siege, repeatedly attacked Arand, a Pakistan town across the border. Pakistanis suspect that after

for allowing the mujahideen to support them from the border.

FRANCE-GERMANY

A SUMMIT WITH DIFFERENCES

The Mitterrand-Kohl summit which was held in Constance, a village overlooking Lake Constance, can hardly be called a success. The two leaders agreed on very few things. One of the major points of difference was Reagan's Strategic Defence Initiative (SDI) research programme, popularly known as Star Wars. While Kohl had voiced support for Reagan's plan in the Bonn summit with the American President, Mitterrand firmly rejected it on strategic as well as political grounds. Instead, he has been promoting the Eureka project which aims at creating a special agency to pool West European research in the fields of laser and the particle beam and is the European reply to Reagan's SDI. Although Kohl declared at the summit that technological cooperation was a 'vital necessity' he disappointed Mitterrand in not offering fuel support and financial backing for the project.

The two governments also disagreed on trade and agricultural policies. While Kohl agreed with President Reagan that a new round of General Agreement on Tariffs and Trade (GATT) talks should be held soon, Mitterrand felt that this would only result in the creation of a new 'battle field' for renewed US attack on the farm policies and tariff barriers of the European community. West Germany has also refused to accept the European community's cereal price reduction, saying that political realities should prevail. The one bright spot in the summit was that neither leader was ready to antagonise the other and both agreed that the Franco-German relationship was fundamental to the "success of Europe".

SOUTH AFRICA

GUERRILLA WARFARE CONTINUES

In a determined operation to flush out alleged guerrillas of the African National Congress (ANC) from Gaborone, the capital of Botswana,

South African troops crossed over and attacked 10 suspected ANC strongholds killing 14 people including six South African exiles. South African Foreign Minister Roelof (PIK) Botha justified the attack by claiming that Botswana had been giving asylum to ANC guerrillas who had carried out 36 terrorist raids since last August in South Africa from their bases leading to six casualties. Pretoria stated that despite repeated requests to the Botswana government to hand over the ANC guerrillas, the raids continued and therefore it decided to finish up the job itself. The major haul from the Botswana raid was the capture of an ANC computer which rattled out ANC membership lists and made the policemen's job of rounding up ANC guerrillas a lot easier, as a result of which many ANC guerrillas went underground or fled the country.

This is not the first time that South Africa has engineered attacks against suspected ANC guerrillas in Gaborone. Earlier this year a bomb explosion in a Gaborone house believed to be directed against two ANC members missed its target as they had escaped. The planting of a car bomb leading to the death of a black South African in the Botswana capital is thought to be another instance of Pretoria's involvement.

South African troops also stormed into neighbouring Angola for the second time in the month to search for South-West African People's Organisation (SWAPO) guerrillas and left 61 of the latter dead. The raid, South African officials claimed, was provoked by mortar attack on a South African base. Angolan authorities, however, alleged that the major objective of the attack was to destroy Gulf Oil's Cabinda refinery. Around 5,000 blacks gathered in the black township of Soweto near Johannesburg to protest against the Botswana raid and also to commemorate the ninth anniversary of the 1976 anti-apartheid Soweto riots.

The South African forays into neighbouring African countries have been severely condemned by the UN Security Council during an urgent meeting called by President Quett Masire to review the situation. Member countries of the Non-Aligned Movement, Britain and the US also expressed severe criticism of the action.

NICARAGUA

US AID FOR CONTRAS

President Reagan has done it again. In April, the House of Representatives had voted against Reagan's request for \$14m as aid for the anti-government rebels in Nicaragua. In June, however, 73 Democrats joined 175 Republicans and approved a second request for about twice as much, \$27m, to help the contras. The Senate has already approved its own aid package, and therefore, the



Show of strength Demonstration against troops by Nicaraguan people's militia.

contras are expected to receive funds again from Washington in a short while.

The US has been supporting the anti-Sandinista guerrillas since 1981. The aid had dropped off after revelations some 14 months back, that the CIA had helped the contras to mine Nicaragua's harbours. Earlier this year, 14 Republicans had helped the Democrats to vote down a Bill asking for the renewal of aid. Instead, they wanted to vote for a Bill which called for \$10m in aid for Nicaraguan refugees. However, some liberal Democrats joined the Republicans to cut down this Bill and the contras were left with no aid at all. Sentiments began to change in the Democratic camp when the Nicaraguan President Daniel Ortega Saavedra visited Moscow in search of Soviet aid. Further, it is felt in Democratic circles that the non-interventionist stance of the party since Vietnam had hurt it in the polls. In fact, in the recent elections, a number of younger Democrats ran for office with more liberal foreign policy stands. It needed just a bit of wooing on the part of the administration for Reagan to get what he wanted this time.

However, Reagan has had to make some concessions to the Democratic-controlled House. The US aid to the contras will be limited to items like food and medicine. The House has also specifically forbidden the CIA to administer the funds. The Senate has made no such stipulation and has, in fact, authorised a larger sum of \$38m. It is generally felt in both Houses now that the Sandinistas should be pressurised for change, but it is also felt that they should not be overthrown legally.

The Nicaraguan response to the American step is predictably negative. Ortega has decided to lift a five-month-old voluntary moratorium on arms imports. This may mean that Ortega may soon buy Soviet built MiG aircraft. Washington has declared that such a step would provoke military response from the US. The contras, by themselves, cannot overthrow the Sandinistas, who outnumber them by 1,10,000 to an estimated 17,000. In fact, since April the Sandinistas have pushed the guerrillas over the Honduran and Costa Rican borders. And in May they killed Las Vegas in Honduras, which is the base camp of the largest guerrilla faction, the Nicaraguan Democratic Force (FDN). However, because of a certain amount of disaffection with the Sandinista regime, the contras have been steadily recruiting new members, and the renewed US aid means that the insurgency will continue for a long time.

CHINA

CAPITALISING ON CONSUMERS

Is China turning capitalist? Businessmen have been hypnotised by China's senior leader, Deng Xiaoping and feel that there are almost a billion consumers ready in China to be exploited. On the surface, there are many changes and one sees ordinary citizens sporting

watches, jeans and other consumer articles. But according to James Fringle, *Newsweek's* Peking Bureau Chief, the change is merely superficial.

There has, however, been no major change in the recent past. Peking has opened up Tibet entirely for the first time since 1959. Lhasa was opened to tourists in 1980. Now there is a 528-mile-long overland route from Lhasa to Zhangmu, a village on China's border with Nepal. Thus there is now a road open to the backdoor of the Indian subcontinent. Nepal has offered finances to improve the route in the hope that this would improve its tourist industry, but the Chinese have refused to accept it. In recent years, China has been trying to boost tourism in Tibet. At the same time, to endear itself to the Tibetans, it has changed its stance towards Buddhism. Earlier religious mysticism, as practised by the Tibetans, had been persecuted by the Chinese, but today it is actually encouraged. Buddhist shrines, destroyed during the cultural revolution, are being rebuilt and Buddha figurines are being mass produced for sale at the Gandan monastery in Xigatse. The Tibetans have also not forgotten the Dalai Lama who has been in exile in India ever since he was forced to flee in 1959. According to tourist reports, Tibetans are ready to pay 100 yuan for a picture of the Dalai Lama and monks welcome anyone who brings news of him.

EEC-SPAIN-PORTUGAL

UNWELCOME MOVES

Lisbon and Madrid have finally officially signed the Treaty of Accession, which means that Portugal and Spain will join the European Economic Community (EEC) in January '86. They had applied for membership in 1977. However, the measure is not very popular in either Portugal or Spain. In Lisbon, 18 Social Democrats resigned from the coalition government of Mario Soares the day after the signing of the treaty. Soares responded by resigning from the ministership.

The Social Democrats charge that Soares' Socialists have not lived up to the promises made when the coalition was formed in 1983. There are also other opponents to Portugal's joining the EEC. Members of the fishing community are apprehensive because Portugal's current exclusive 12-mile fishing zone will soon be opened to fishing vessels from the rest of Europe, and the fishing industry will be hard hit. Portugal will become the EEC's poorest member and will face an uphill struggle.

In Spain, too, the response was mixed although Spain has Europe's fifth largest economy, and therefore its prospects are brighter under the EEC. Members of the Basque separatist group, the ETA, used the occasion for terrorism and gunned down an Army colonel and bus driver in Madrid, and used a car bomb to kill a bomb-disposal expert. A Navy non-commissioned officer was also shot dead in the Basque city of Bilbao. Besides the Basques Spanish farmers, too, were not very happy about the Treaty of Accession. Most Spanish farms are small, family-run units and the marketing and distribution system is primitive compared to other European countries. The farmers are worried about being over-run by imports, especially from France. Spanish fishermen and winegrowers stand to lose much from the EEC. Spain will have to reduce the catch of its fishing fleet, the world's fourth largest, and will have to cut back on wine production in return for greater access to the European market for fruits and vegetables.

US SPY CASE

ALL IN A FAMILY

It was a family-and-friends-affair that was finally exposed, thanks to the American intelligence services. The four men so far implicated in the espionage case are John A. Walker Jr., ex-serviceman and currently a James Bond-style private eye; his son Michael Walker, Yeoman 3/C aboard the US aircraft carrier *Nimitz*; his brother Arthur J. Walker, also a US Navy veteran and currently employed by Alexandria, Virginia's VSE Corp to work on maintenance of amphibious vessels; and his friend Jerry A. Whitworth also an ex-US Navy man and currently unemployed. The moles had been operating for almost 10 years, and the tip off came only early this year, when John Walker's former wife Barbara, who had known about her ex-husband's side activities for some time but had not known that her son was also involved, decided to spill the beans.

While the others passed vital information to John Walker, he dropped them off at scheduled 'post-boxes' for the Russians to come and collect. The members of the Walker ring had top-secret security clearances and experts fear that they may have let out some closely guarded secrets in coding, anti-detection provisions and cruising patterns. It has been suggested that information from the Walkers may have been responsible for

the improvements that US experts have detected in the Soviet missile submarine force. However, it is doubtful whether the Americans will even be able to figure out what and how much has been lost to them, although damage assessment is going on. This too, is being done under secrecy, for the US does not want the USSR to know more than it already does. Perhaps the maximum damage has been done by Whitworth, who had served in the Pacific as communications watch officer aboard the nuclear-powered carrier, Enterprise, and had been in charge of communications security at the Alameda Naval Air Station near Oakland. He was also familiar with the US Navy's Indian Ocean activities owing to the two duty tours he made to the island of Diego Garcia.

What bothers the Americans is that this new breed of fifth columnists are unlike the older brand as typified by Kim Philby. There is no ideologically motivating factor behind their urge to transfer secrets to the Soviet Union. In fact, John Walker is a Reaganite according to his business associates, and also has some connections with the white racist organization, the Ku Klux Klan. The motivating factor, apparently, was money. He was a spendthrift and therefore needed more than he earned. The Americans, in general, are alarmed because this attitude does not augur good. The defence establishment thinks that this may be the tip of an iceberg. Already 15 people have been implicated at various levels, in separate espionage cases, in the last 12 months. For the first time, a retired agent of the FBI, Richard Miller, has also been caught spying. It is no wonder that the US Defence Secretary, Casper Weinberger, vented his ire recently when he said that the suspects in the Walker case, if proved guilty, "should be shot".

GREECE

PAPANDREOU RE-ELECTED

PM Andreas Papandreu was returned to power in the elections to the 300-member Parliament in Greece. His Panhellenic Socialist Movement (PASOK) won 45.8% of the 6.4m votes cast and gained a clear majority of 161 seats. The losers were the New Democracy Party of Constantine Mitsotakis, which won 40.8% of the votes and 126 seats and the Communist Party (KKE), which got 9.9% votes and 12 seats.

Ever since he first came to power in 1981, Papandreu has been promoting a Third Road to Socialism and during the campaign he stressed his party's social welfare achievements. For the West, however, Papandreu has often been an irksome ally. Although Greece has been a NATO member since 1952, the PM opposed the NATO decision to deploy Pershing II and Cruise missiles in Western Europe. He refused to condemn the shooting down of a Korean airliner by Soviet jet fighters in 1983, saying that the aircraft was a US spy plane. He has also threatened, time and again, to pull Greece out of NATO and the European Community. This March he withdrew his support for the pro-Western Constantine Caramanlis and backed the Leftist Christos Sartzetakis for President. It is expected that the Parliament will soon pass a constitutional amendment limiting the powers of the President. This will result in more power for the PM.

However, the Western allies were somewhat relieved at his victory, because they had feared that if it was otherwise, the Communists would hold the balance of parliamentary power. Some analysts also feel that Papandreu will be too pre-occupied with domestic problems in the coming years to sail forth against Greece's ailes. Inflation now runs at 18.5%, the highest in Western Europe, and unemployment is around 8%. The foreign debt has risen to \$12.5b from \$7.9b in 1981. The US has leased bases in Greece and this brings in \$500m in US military aid every year besides providing employment to about 1,650 Greeks. As such, Papandreu is not expected to pull the country out of the NATO alliance. Further, Greece gets subsidies from the European Community and its partners hope that by logic, the country will remain in the Community.

ESSAY CONTEST

Even at its ripe old age of 100 years, the Congress month stands strong and mighty. The party has, no doubt, had a chequered history—the stormy pre-independence days and the debacles of factionalism which crept in (trying to strike at the very roots of the party) during the post-independence era.

With a view to setting young minds thinking, CCTimes announces an essay competition on 'Indian National Congress—Gains And Losses'.

Send in your entries in not more than 500 words, latest by Aug 25, and win prizes worth Rs 150, Rs 100 and Rs 75.

NEPAL

UNDER TERRORIST ATTACK

Bomb blasts rocked the usually peaceful Himalayan kingdom of Nepal. Five blasts shook Kathmandu, two near the west and south gate of the Royal Palace where King Birendra and his family live. Bomb explosions also damaged the National Panchayat building, the Virsingha Durbar (secretariat building) and the Annapurna hotel. More explosions were reported from the town of Bhairawa, and one each from Danghadi and Pokhara. Nine people were killed and around 27 were injured in the blasts. An unknown group called the Samyukta Mukti Bahini claimed responsibility and leaflets thrown on Kathmandu streets warned that the terrorists would attack again. The police quickly arrested 125 suspects and unearthed nearly 100 explosives in and around Kathmandu. Most leaders of the outlawed Nepal Congress Party and the Nepali Communist Party were put in jail.

The bomb blasts were the first major act of political terrorism in Nepal's history and were suspected to have been masterminded by King Birendra's political opponents including the Nepali Congress Party which is peacefully agitating for a return to parliamentary democracy.

JOSEPH MENGELE

END OF A GUESSING GAME?

Are a pile of bones, some clumps of hair, six teeth and a pair of rotting trousers last remains of the 'Angel of Death'? According to Romeu Tuma, the federal police chief in Sao Paulo, they are.

It appears that Joseph Mengele, the Waffen SS doctor responsible for the death of 4,00,000 Jewish concentration camp prisoners at Auschwitz has finally been found—dead. The trial opened on May 31, following a tip off from an unidentified informant. The West German police raided the house of one Hans Sedlmeier, a former employee of the Mengele family firm in Gunzburg, West Germany, and found evidence which led them to an elderly Austrian couple, Wolfram and Liselotte Bossert who live in Sao Paulo in Brazil. They claimed that Mengele, who had been living under the assumed name of Wolfgang Gerhard, an Austrian who was supposedly responsible for looking after Mengele, and had drowned at the beach resort of Beritoga in 1979, and been buried at Embu, 20 miles south of Sao Paulo. Shortly afterwards, a number of people who had so far kept quiet came forward with further identifying evidence. The doctor had escaped from Germany a few years after the end of the war and had adopted a Houdini-esque style of disappearing. He had been sighted a number of times over the last four decades (and some have claimed to have sighted him even after 1979) but had always managed to escape his would-be captors. He was wanted for prosecution by the governments of West Germany, Israel and the US and carries a price of \$3.4m on his head. He was almost caught by Israeli commandos in the 1960s but proved to be more elusive than Adolf Eichmann, another of Hitler's right-hand men, who was seized by the Israelis and hanged in Jerusalem.

After his escape from Germany, Mengele lived in various countries in South America. He was given citizenship by the Government of Paraguay in 1959, but this was, interestingly, cancelled in 1979, the year he allegedly died. Since 1961, he had apparently stayed with a Hungarian couple, Geza and Gitta Stammer, to whom he had been introduced by Gerhard. Initially, the couple had not suspected his identity and had given him work on their farm. Later, when they discovered his true identity, they claimed that they had grown apart, but for fear of their children's lives, which they said were threatened, and also from a sense of guilt, they had allowed him to stay on, first with themselves and later in a house owned by them.

The missing link is Wolfgang Gerhard, who helped Mengele through all these years. He himself died in 1979 and his children claim that he had nothing to do with the Nazis. It is true, however, that his hometown, Graz, lies in the path of the underground railroad used by 'Odessa'—the Organisation of Former SS Members—to spirit many Nazis out of Germany after the war, and many residents say that the network and railroad still exist.

Although there are sceptics, most experts feel that Mengele has finally been traced. The body has been exhumed and technicians have begun to match the remains with the medical records of the Nazi doctor. Forensic and handwriting experts have checked the evidence available and have come to the conclusion that this is not a false find. A lot of evidence has been provided by Mengele's family in West Germany, who has so far been close-lipped but who had apparently kept contacts with Mengele all these years.

SANJUKTA BANERJI & A. N.

EDUCATION

MEDICAL ADMISSIONS: A NEW LINE OF TREATMENT

BY AMRIK SINGH, Former Secretary, Association of Indian Universities

As per the Supreme Court judgment, the Medical Council of India has been directed to conduct an all-India merit exam in order to regulate admissions to medical colleges in the country. The pros and cons of this new selection procedure

Over the years a system had developed whereby, leaving aside one or two exceptions, almost every state conducted a selection test for those seeking admission in medical colleges. Only those domiciled in the particular state were entitled to sit for the test conducted by the respective state.

During the last one year, however, certain significant changes have taken place with regard to the procedure for admission in medical colleges. In June 1984, the Supreme Court gave a decision on the subject which will rank, in the years to come, as one of the more important decisions with respect to higher and professional education.

In a democratic polity like ours, what appears to that even when things go wrong people bear with it until there comes a stage when there is almost an explosion. Something of a similar kind happened in the medical colleges. Admissions were being manipulated. All kinds of unfair restrictions were being imposed. The quantum of reservations was being unduly increased and several other questionable things were happening. In consequence, the Supreme Court chose to intervene decisively as to almost direct the executive to establish an altogether new system of selecting the students for admission eligibility.

According to the Supreme Court ruling, domicile restrictions are not consistent with the Constitution of India; the Constitution recognises only the citizenship of India. For any state to argue that only those students domiciled in that state are eligible to sit for an entrance test cannot be regarded as valid in the eyes of law. In other words, every Indian is a citizen of India irrespective of the state he belongs to. That being so, according to the Supreme Court, everyone who is duly qualified to sit in the exam can do so without the state which conducts the exam having the right to exclude him from it. Hence, at one stroke, the practice built up in the country in the various states of excluding those

who did not live within their respective territorial jurisdiction, was abolished.

The Supreme Court had earlier given certain judgments after considering some of these issues. In no judgment had the Court approved of what the states were doing, though in one or two cases there was partial approval of some of the related practices. In giving the present judgment, however, the Supreme Court reviewed its earlier stand in detail and set it aside. In the ultimate analysis it based itself on two provisions of the Constitution. One which says that citizenship is that of India and not of any state and the second which ensures for each citizen the right to education, employment and movement throughout the Union of India. Secondly, the Supreme Court did not choose to reopen the question of reservations sanctified by law or even some of the other reservations made from time to time by the various states. Instead what it argued was that reservations, as they existed today, may be permitted but they should not be permitted to exceed 70% of the total number of admissions. This brings us to the third aspect where the Court ruled that a minimum of 30% seats should be thrown open to meritorious students, to start with. In course of time this particular percentage could be increased.

In order to give practical effect to the decision the Supreme Court also directed that the Medical Council of India, a statutory body, should work out a scheme for conducting an all-India merit exam in order to regulate medical education in the country. A few weeks after the pronouncement of the Supreme Court judgment, on the subject, a representation was made regarding the inability of giving effect to the judgment, with effect from 1984, because some of the students of the 1984 batch were already admitted in medical colleges. This submission did carry weight and the Supreme Court therefore ruled that the decision be implemented with effect from 1985.

It was for the Medical Council now to take the next step with the approval of the Ministry of Health. However, a few months after the Supreme Court delivered its judgment, there was political turmoil in the country followed by the general elections and the installation of the new government. All these factors combined together to create a situation whereby the Medical Council could not formulate a workable

plan to conduct an all-India merit exam.

Alternatives

The matter, therefore, went to the Supreme Court once again. The Court was faced with two choices. Either to enforce the decision from 1986 or to enforce the decision with effect from the current year. But if the Medical Council was unable to conduct an all-India exam in 1985, then there should be 30% reservations in the tests conducted by each state. Ultimately the Supreme Court opted for the latter alternative. This year, as in the past, the test will be conducted by each state. But the earlier restriction of domicile will not apply in respect of 30% of the seats.

Despite this welcome liberalisation in favour of meritorious students, the situation this year is going to be somewhat confusing. Most states conduct the test almost simultaneously within a period of two or three weeks. Even if a student wishes to appear for more than one test, probably the utmost he will be able to do is to appear for three or four tests. And that also in states which are not too far from one another. Had the test been all-India in character, as was originally visualised, the situation would not have arisen. Students would have taken just one test at any centre which was nearest to their residence. An all-India merit list would have been prepared on the basis of this test, more or less on the pattern of the Joint Entrance Exam for the IITs, and seats would have been allotted partly on the basis of merit and partly on the basis of preference expressed by the individual student. May be this is what will happen from 1986 onwards.

This Supreme Court decision is likely to usher in a new era in Indian academic life. For instance, what has been made applicable to medicine would almost automatically become applicable to other professional courses. The entrance test for admission to the IITs is over a quarter century old. But there are a large number of other engineering colleges as well. It stands to reason that they, too, will get drawn into the network sooner or later. Indeed this is precisely what might happen in the admissions for other professional courses, too. It would be naive to imagine, however, that a problem would not arise.

Constraints

One obvious problem that would arise

(Continued on page 30)

A TASTE OF CLASS

For The Classroom

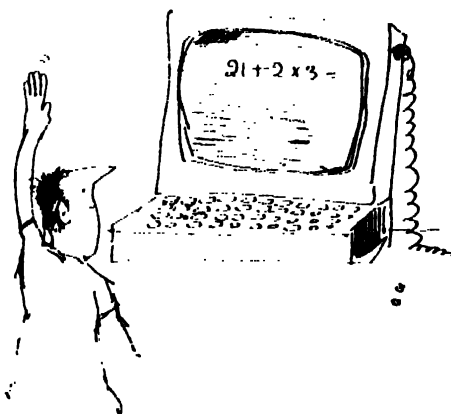
BY VIJAY KONWAR

The 21st century is round the corner. And efforts are on to equip India with the wherewithal to successfully combat its herculean challenges. CLASS, the exclusive project to induct 'Computer Literacy And Studies in Schools' is one such effort. Undertaken by the Union Ministry of Education in cooperation with the Department of Electronics and so far introduced in 250 selected government and government-aided schools in urban areas throughout the country, the project at the moment is halfway through its pilot phase. Depending upon the feedback received from this pilot project, plans for installing computers in 2,50,000 schools by 1990 at a cost of Rs 300 crores, would be finalised.

The BBC-model B computers have been purchased from a British firm, Acorn, under a bilateral trade agreement with the UK at a 40% premium over the prevailing market price. They are expected to make children think in totality rather than strait-jacketing learning. Class XI and XII students constitute the target section of the pilot project, though plans are to extend it downwards to the Class VII-X level. A general familiarisation of the students with computers and their use is the immediate objective of the programme. It is expected that through regular interaction with the given systems, a smaller group of students (initially in the age group 16-18) will be able to develop higher abilities to think logically and to take decisions on the basis of processing of information and data.

Students will familiarise themselves with the computers by using commercially available canned software to learn Chemistry, Physics, Mathematics and Biology. Word processing, drawing graphics, accounting, storing and retrieving data, as well as some pure fun and games packages complete the CLASS curriculum. Managing the operations does not appear to be too difficult; familiarity with the keyboard, the computer's parts and LOGO are all that the students need to have. LOGO is not something that will tax the grey cells; considering that children use it by means of a 'turtle' that moves around the screen in response to simple commands such as "move forward, backward or sideways", etc. After all, it is only a simple operational language and does not require knowledge of computer logic.

One of the stated objectives of the CLASS project is "to test the computers as an educational tool for improving the



If there is an urgent need for CLASS, there is an equally, if not more, urgent need to not just provide education to the millions who have little or no access to it, but also to improve the quality of teachers and education

quality of education... (and) initiating computer assisted instruction". CLASS has, however, made it clear that computers are not merely an additional teaching aid; that they are not intended to replace books nor to provide simply some spectacular graphics to a teacher's repertoire. They are expected to provide a new way to teach different skills, to help in developing a way of thinking, a way of understanding and processing information and a skill of analysis and synthesis.

In the first phase, selected schools are going to be concerned with the computer literacy programme, while simultaneous efforts are made in selected institutions to experiment with the idea of computer-assisted learning. All this would lead to the introduction of computer related courses at the plus-two stage.

CLASS derives its justification from the rationale that school computers are essential for preparing a new generation of workers familiar with the 21st century technology and for fostering a "computer culture". Judging by the pace of the fast changing technology, computers are expected to dominate all kinds of activities in homes, offices and industries. So tomorrow's work force must be made capable of coping with the exacting demands of a new technological society. No wonder then, the project is intended to "develop

higher levels of intellectual ability and creativity", according to Prof A K Jalaluddin, Joint Director of the National Council of Educational Research and Training (NCERT).

Computers can be a powerful technology for making a significant change in the methodology of the teaching and learning processes. In the case of a subject like History for instance, it is difficult to communicate to a student all the related events that simultaneously contributed to the rise and decline of an empire. The computer provides a technology by which the interactive nature of forces and influences can be illustrated, allowing a student to examine the different variables in a given situation and to manipulate them. History then becomes a live process, the way it really is and not just a set of dry facts. Computers thus enable the student to develop a new skill of analysis and to understand relationships between forces and events which is rather difficult to communicate through the traditional educational methods and materials.

All said and done, however, the application of computers in schools must be tailored in the context of the prevailing educational requirements, culture and languages if it is to be accepted and ultimately prove beneficial. In this context, software development becomes a very important issue. Care will have to be taken to ensure that innovative pieces of software are developed so that the new technology can be assimilated into the country's largely traditional framework. Furthermore, software development, while requiring an understanding of the process of education, happens to be a multidisciplinary endeavour; time and experience, therefore, have a key role to play. Time because teachers, field engineers and other support personnel will have to be trained. Experience because a high level of ingenuity and wisdom will be called for.

Apart from software development, there are a host of other, more complex issues that seem to question the very relevance and feasibility of the project itself. CLASS exponents face the not-too-easy task of explaining why crores of rupees are being spent on acquiring micro-computers for introduction in a few schools, when 88% of the 6,34,144 schools in the country lack elementary facilities such as buildings, electricity and often even chalk and blackboards.

It is strongly felt in many quarters, and

(Continued on page 30)

IDA: A PARTNER IN AID

BY BECO & DAS

An affiliate of the World Bank, IDA has extended its helping hand in restructuring the economy of several less-developed nations. But, in the recent years IDA's generosity has been curbed by problems of resource-mobilisation from donor countries.

International Development Association (IDA) is an aiding centre for several developing countries who look up to it for financial assistance. Started in 1960, IDA is an association of 'donor' countries who have come together under the aegis of the World Bank to help the less developed countries (LDCs) in the task of restructuring their economy. The level of development in LDCs, particularly in South Asia and Africa, is dismally low. Plagued by a variety of socio-economic problems, these countries do not have adequate domestic resources and hence they require external assistance on a continuing basis.

However, the external aid and private capital that these countries received earlier was inadequate. Moreover, these countries were in no position to take loans carrying high interest rates and short maturities which could accentuate their debt servicing problems over the years.

As an affiliate of the World Bank, IDA was to ensure that concessional loans given to LDCs would be utilised for financing projects, similar to those financed by the World Bank itself. It was also visualised that IDA, the 'soft-loan wing' of the World Bank, would act as a coordinating agency among donor countries unhindered by political lobbying.

Replenishments

IDA is funded in the form of subscriptions or contributions from developed countries, special contributions from its rich members and transfers from the net earnings of the World Bank and IDA itself. So far, seven replenishments have been made, IDA-7 being the latest. These replenishments served a two-fold purpose. Firstly, the unabatable demands for concessional finance by the LDCs, particularly after the oil crisis in 1973, was met to some extent; and secondly the real value of IDA finances which was being constantly eroded due to accelerating inflation was enhanced (see table).

IDA-7 which concluded on Jan 15, 1984, witnessed a substantial decline of 25% in its replenishments in comparison with IDA-6, a matter of grave concern for the beneficiaries.

Credits

The main criteria for the allocation of IDA credits is the per capita income of the

Replenishment of IDA Resources (1961-1984)

		(Million dollars)	
% change		Current dollars	
Initial	(1961-64)	757	-
IDA-1	(1965-68)	745	-1.6
IDA-2	(1969-71)	1,271	+70.6
IDA-3	(1972-74)	2,441	+92.0
IDA-4	(1975-77)	4,501	+84.4
IDA-5	(1978-80)	7,732	+71.8
IDA-6	(1981-83)	12,000	+55.2
IDA-7	(1984-)	9,000	-25.0

Source: *IDA In Retrospect* by Oxford University Press and Newspapers

recipient country. Countries which have an annual per capita Gross National Product (GNP) of less than \$681 (in 1979 dollars) are eligible for IDA credits. Other parameters taken into consideration include the country's credit worthiness, its accessibility to commercial borrowing, its economic performance, the density of its population and the existence of viable projects in the borrowing nation.

Interest-free IDA credits are available to governments only and may be obtained on payment of nominal service charges at the rate of 0.75% per annum. The period of repayment is 40 years excluding 10 years of grace period. This is in contrast to World Bank loans on which interest of 12% per annum has to be paid and the loan has to be repaid within 20 years. Thus LDCs have benefited immensely from IDA credits.

Though unmatched by the actual requirements of LDCs, the quantum of IDA aid has recorded a considerable increase: while the recipient countries received \$1,150m (current) during IDA-1, the figure rose to about \$14,658m (current) during IDA-6 (upto 1982 only). The number of beneficiaries till June 1982 was 78.

LDCs have benefited from IDA credits in that they have been able to strengthen their agriculture and enhance their pace of rural development. Besides, such aid has helped to improve the transport sector, the energy base and the industrial production in these countries. Public utility services like education, health facilities and water

supply have also improved considerably.

IDA and India

IDA assistance to India has resulted in considerable advantage. India's share is 40% of IDA funds. Statistics reveal that while the amount authorised under IDA aid was about \$578m (current) during the Third Plan, it almost tripled itself to about \$1,556m (current) during the Fourth Plan. During the Fifth Plan the figure touched a height of nearly \$5,581m (current). This increasing trend halted during the Sixth Plan, the amount of aid authorised approximating to about \$4,568m. However, India has not been able to utilise this aid fully, both because of infrastructural difficulties at home and the adverse conditions imposed by donor countries, governing such aid.

With the possibility of China getting IDA assistance, India's share in IDA funds is expected to go down further. This has recently been corroborated by Sir William Rye, an Executive Vice-President of International Finance Corporation (IFC) who remarked: "Indian share is certainly going to be lower than it has been in the past."

IDA credits have helped various sectors of our economy such as agricultural and rural development, construction, irrigation, power, telecommunications, ports, industrial imports, fertiliser production, shipping, etc. Some of the prestigious projects financed through IDA credits include the Sone Irrigation Project, Bihar, Punjab Agricultural Credit Project, Gorakhpur Fertiliser Expansion Project, Bombay Water Supply and Sewerage Project, Karnataka Dairy Development Project, Rajasthan Canal Command Area Development Project, Godawari Barrage Project, several telecommunication projects, rural electrification projects, railway projects, etc. IDA has also been providing funds to the Industrial Development Bank of India (IDBI), as also the Agricultural Refinance & Development Corporation (ARDC) for their developmental activities, pertaining to agriculture and rural areas.

Issues

Over the years of its functioning, IDA has constantly been dogged by several problems. Firstly, various donor countries have considerably reduced their shares over the years. For example, the US has reduced its share of IDA funding from 27% in IDA-6 to 25% in IDA-7. Five other countries, viz. West Germany, Kuwait, Sweden, UK and Brazil have also reduced their contributions. Worldwide recession, problems of balance of payment and heavy emphasis on defence expenditure in the budget of some big nations like the US are cited as reasons for this phenomenon. However, a deeper insight into the problem reveals that some donor countries have undergone a realignment of political attitudes towards the system of mul-

ilateral assistance to certain less developed countries. Thus the problem of fixing shares of donor countries bristles with controversy and has posed a serious deterrent to resource mobilisation by IDA.

Another controversy relates to whether all the countries should continue to receive credit on the same soft terms, the implicit idea being reduction of the 'softness' in case of creditors who have already received a lot of assistance from IDA. Thirdly, the idea of reducing the maturity period of the loans is also being mooted, also being debated is the dilution of funds on the basis of per-capita income of the recipient country.

India's economic performance has been laudable in the recent years, imparting it greater credit worthiness for private capital borrowings, though adverse international environment has put tremendous pressures on its balance-of-payments position. Despite these favourable factors, it has been difficult for IDA to allocate credit to India solely on the basis of per-capita income criterion. Hence, India's economic development is being adversely affected.

In the wake of the swift pace of economic, scientific and technological developments in various countries, IDA's terms of credit need to be broadened to include various other parameters such as economic performance of a country, its credit worthiness, availability of viable projects, etc. These criteria should be applied objectively.

The less developed world has also to play a specific role in making the IDA assistance prove more effective. Firstly, these countries should explore the feasibility of entering into bilateral agreements for assistance with other countries or agencies without relying too much on IDA. Secondly, serious and meaningful efforts have to be made by these countries to restructure their economy. The doctrinaire approach to problems has to be shunned in favour of pragmatic policies. The gestation period of various projects should be minimised; this would, in turn, reduce the incidence of cost over-runs and wasteful expenditure in many projects run with IDA assistance.

The problem of meeting the increasing demands of LDCs for assistance from IDA against the depleted replenishments by the donors can be eased to some extent by mutual understanding. It should be realised that the poorer nations serve not only as potential markets for the high-technology products of their developed counterparts, but also as potential suppliers of various primary and intermediary goods to them. It is, therefore, in the fitness of things that developed countries shun the path of narrow nationalism and work for the development of 'have-nots'.

EDUCATION (Continued from page 27)

is that of hostel accommodation. Henceforth, there would be much greater movement of students from one state to another than there used to be earlier. Previously, in large cities and metropolitan towns and even some of the other towns, a substantial number of students in medical colleges were local. They, therefore, did not need hostel accommodation. This situation would now change; much more hostel accommodation would be required. Since it takes time to create residential facilities, the various all-India coordinating bodies which are responsible for the respective professional courses would do well to plan much in advance.

Again, the cost of professional education may go up because a larger number of students may have to move to places away from their home states. Not all meritorious students would have the necessary resources. Quite a few of them would therefore require monetary help—particularly if the fee is raised. They would therefore need loans and scholarships.

The social and academic consequences of the Supreme Court ruling are also likely to be far reaching. In social terms, a much larger number of students would move from one part of the country to another. In a country as vast and varied as India, this will be a welcome move.

In academic terms, 30% reservations for meritorious students will also entail problems of a different kind. Admission into a medical college will certainly become easier in terms of legal disabilities but it will not become easier in terms of academic selection. On the contrary the selection might become more rigorous.

Dynamic move

The Supreme Court has certainly handed down a decision which in the long run would change the direction of things in the academic as well as in the social sphere, thus making up for the inert attitude of the Executive. For years together the Executive has been underperforming and lacking in dynamism. The Medical Council of India has not been doing all that it could, either due to its own internal problems or because the Ministry of Health was interfering with its working. But the fact remains that the council has not given evidence of competent and purposeful activity.

That the Medical Council of India dragged its feet and did not perform efficiently enough to be able to implement the decision with effect from 1985 only goes to underline the point that vested interests are acting as stumbling blocks. Now it is for the Executive, viz. the Ministry of Health to see that henceforth things happen as they ought to happen.

EDUCATION (Continued from page 28)

not without some justification, that computers will only strengthen those already in power. Since they are being introduced in select schools and, that too, only in urban areas, the vast majority, which has so far been denied even the rudiments of education, will continue to be in the doldrums. While the miniscule minority becomes richer and more powerful by virtue of its mastery of tomorrow's grand technology, the authorities would do well to pay heed to this and hammer out a foolproof plan of modernisation that will be beneficial to all.

Will CLASS make students truly "computer literate"? Many harbour doubts about its ability to do so. It is felt that the kind of skill being imparted through the programme will probably prepare them for the lowest rung of computer users. Since the project is likely to accomplish no more than imparting a generalised awareness, it is a wasted endeavour, the critics feel. This kind of familiarity would come anyway when the new technology becomes commonplace.

Whatever may be the criticisms levelled against CLASS, it would be foolish to reject it outright because that would tantamount to throwing the baby out with the bath-water, to use an age-old adage. The preparation of a computer-aware workforce is a must, in view of the fast approaching highly competitive era of the 21st century. India being a developing country it is all the more necessary for it to recognise the indispensability of the micro-computer in the automated future of the dawning century and take steps well in advance to retain some semblance of credibility in the world market.

At the same time, there is no denying the fact that it would be ridiculous and utterly futile to try and push only a microscopic minority of the Indian populace into the 21st century while the majority languishes in a sluggish, backward and monotonous 19th century existence. If there is an urgent need for CLASS, there is an equally, if not more, urgent need to not just provide education to the millions who have little or no access to it, but also to improve the quality of teachers and education.

Unless simultaneous efforts are made to lift education from the miasma of unproductive memory-based learning and train imaginative, innovative and dedicated teachers, CLASS will accomplish nothing more than introducing mere gadgetry in schools. Needless to say, the much-desired change in education would then become a mirage. Gadgetry will probably give a new look to education, it will not change it. The need of the hour, therefore, is systematic thinking.

CAREER COUNSELLING

BY G. J. UNNITHAN, Director, Students Advisory Bureau, University of Rajasthan

Please let me know the qualifications needed to become a flight engineer and the selection procedure for the same.

Horash Prabhu, Udipi (Karnataka)

A flight or ground engineer is recruited by commercial airlines/air force from candidates who have graduated in electrical or mechanical engineering.

I am orthopaedically handicapped, in the sense that the movement of my right hand is restricted. But I can perform activities like writing and eating normally and efficiently. Am I eligible for the Civil Services?

Dipanker Mukherji, Gondia

According to the regulations relating to the physical examination of candidates for the Civil Services, "To be passed as fit for appointment a candidate must be in good mental and bodily health and free from any physical defect likely to interfere with the efficient performance of the duties of his appointment." There is no further specific regulation for the orthopaedically handicapped; the decision will be left to the Medical Board. Since your handicap is minor and does not interfere with the discharge of your duties, you may assume that you can appear for the exam.

I am studying in B.Com. 1st year and wish to do C.A. together with B.Com. I want to know whether I can appear for C.A. final without having practical experience of auditing under the Articleship of a Chartered Accountant.

Surendra Jain, Guwahati

Articleship is compulsory while preparing for C.A. intermediate and final exams. You may complete your B.Com. privately or by correspondence while undergoing Articleship.

I have been an NCC cadet in college. I want to join the army. Kindly advise me as to what I should do.

Anil Dhar, Srinagar

You will have to appear for the Combined Defence Services Exam in October 1985. This exam is advertised by the UPSC in the newspapers on Apr 27, 1985. There are a limited number of reserved posts for the NCC 'C' certificate holders.

I am a married woman with Honours in Philosophy. I had a paper in Psychology too. Is it necessary under law to have some specific qualification to

practise as a marriage and family counsellor...?

Sushma Gupta, Calcutta

No specific qualifications or registration is required to practise as a marriage and family counsellor. However, training, either in Social Work, Home Science, Psychology, Sociology (with special papers in the field) or Law is helpful. Besides theoretical knowledge, counselling requires sensitivity, maturity, empathy and understanding of marital and family problems. Since you will be self-employed, the success in this work will depend on the reputation you can establish.

I have a diploma in Mechanical Engineering from the Gujarat Board. I would like to have the list of Indian universities/institutes which offer diploma in Russian Language (not through correspondence). What is the duration of the course?

Anandkumar, Ahmedabad

There are 36 universities conducting diploma courses in Russian. In Gujarat you may contact the M.S. University, Baroda.

I am a student of Electronics Engineering, studying in pre-final year. I would like to be a civil pilot. What do I do?

M. Saeed Baig, Allahabad

Please contact the flying training school in your area (many airports in the country have flying clubs) where you can enrol for Student Pilot Licence after the prescribed medical examination. You can then take training for Private Pilot Licence and subsequently for Commercial Pilot Licence on completion of the prescribed number of flying hours (approximately 80 hours can be flown at a subsidised fee, depending on qualifications and age—minimum is matriculation and below 22 years). All costs have to be borne by the candidates. Employment opportunities are fairly limited.

I have a reading speed of 180 w.p.m. I want your suggestions regarding this handicap.

Madan Saikia, Dibrugarh

A minimum reading speed of 200 words per minute is considered necessary for students at the university level. You are not far below this, but it will impair your performance if you do not improve your reading speed and comprehension. Please avoid reading words separately, read the sentence and understand the meaning of

the sentence rather than the meaning of the individual words. Read silently, do not articulate the words. Read only with your eyes, do not move your head or any other part of the body. Concentration is very important and if you find that your mind wanders away from your studies, you should examine the causes, so that both your study habits and reading speed improve. Efficiency and organisation of one's studies are most important for success.

I am a 1st class Zoology graduate and want to do M.Sc. (Zoology) through correspondence or privately from any university.

Krpudi, Kasibugga

M.Sc. (Zoology) by correspondence is available at Annamalai University only. Please contact the Director, Directorate of Correspondence Courses and Continuing Education, Annamalai University, Annamalai Nagar 608 002 in June/July.

I have done B.Sc. (Hons) in Chemistry. I have a diploma in Aircraft Maintenance Engineering with three years experience. Nowadays I am also working on aircraft. But I want to go to a foreign country.

Kumar Rajiv, Patna

You may register with the Dept of Personnel and Administrative Reforms, Ministry of Home Affairs, Central Secretariat, New Delhi, by submitting an application form which is available on pre-payment of Rs 5 I.P.O. from the Controller of Publications, Department of Publications, Civil Lines, Delhi 110 054. Registration for foreign employment is possible for technical/professional personnel with three years experience.

NOTE TO READERS

Before rushing in your career problem, check if it can be solved by looking up our sections on *Careers* or *Career Counselling* in the earlier issues. Space is limited: the mail received staggering. Letters chosen are those of general interest or in particular cases where the information is hard to find or has not been published before. Many readers ask for a personal reply. Sorry, this is not possible. So please don't send postage or envelopes. Make your queries specific and brief. Send them to Career Counselling, Career & Competition Times, 10 Daryaganj, New Delhi-110 002. Your letters should be accompanied by the coupon.

CAREER COUNSELLING
COUPON

Practice Tests

In preparing these tests, we have tried to visualise the questions you are likely to face in your actual exam. Great care has been taken to frame questions which are of the same standard as those you'll encounter in your exam.

Rating: Evaluate your performance on the basis of the following score-card:

- 100 questions in 60 minutes—Excellent
- 60 questions in 60 minutes—Good
- 50 questions in 60 minutes—Fair
- 35 questions in 60 minutes—Poor

Tips: 1. Do not waste time over questions you are not sure about. 2. Give the problems some thought before choosing the answers. 3. Read the directions carefully before answering the questions. 4. Do not try to guess the answer.

Test Of Reasoning

By EDGAR THORPE

FOR POs, RRB (CLERICAL GRADE), CAT...

Here is a selection of verbal, non-verbal and reasoning tests to help you in the forthcoming PO, RRB (Clerical Grade), CAT and other management entrance exams. Attempt these tests in order to assess your performance and further eliminate your weak spots, if any.

Time: 40 minutes

Scores: 1. Give yourself one mark for each correct answer. 2. Deduct one mark for each wrong answer. 3. Then rate yourself as follows:

Excellent...83-88 Very Good...77-82 Good...71-76 Fair...65-70
Poor...Below 65

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the question. Answers are given at the end of these tests.

VERBAL TESTS

I Directions: In questions 1-6 there are five groups of words in each. All of them have some similarity in their meaning, but one of them is different in kind. Tick the letter

1. (a) breast (b) throat
(c) pleat (d) throat
2. (a) mail (b) mail
(c) ka (d) foil
3. (a) dent (b) bent
(c) kent (d) rent
4. (a) prone (b) delegate
(c) date (d) late
5. (a) blade (b) learning
(c) neat (d) clean
6. (a) frank (b) thank
(c) tanks (d) blank
(e) chunk

II Directions: Questions 7-12 each have a set of alphabets following a certain

order/pattern. Find the pattern in order to fill in the blanks to complete the series

7. ABYZ CDWX ---
(a) CD (b) YZ
(c) EF (d) UV
8. ABCXZ DEF ---
(a) DEF (b) GHI
(c) UVW (d) RST
9. BAFEDHIG ---
(a) LMO (b) LKJ
(c) CBA (d) QRS
10. DEF JKL PQR ---
(a) XYZ (b) LMO
(c) VWX (d) PQR
11. AZ BY CX DW ---
(a) EF (b) EV
(c) EW (d) EX
12. ABCD BEFG HIJ DKLM
(a) ABFG (b) DKLM
(c) IJKL (d) There is no set sequence

III Directions: Questions (13-21) consist of very common words, but the letters of the same have been scrambled. Also, the letters have been allotted numbers according to the sequence in which these

appear in the alphabet. You are required to find the correct word and state which of the alternatives gives the meaningful word so formed. Note that of the two similar letters, only one has been numbered

13. I F D N S D E G
1 5 4 3 7 6
(a) 4 3 6 5 7 5 4 1
(b) 1 4 3 7 6 5 4 5
(c) 4 5 7 1 6 3 5 4
(d) 7 1 6 5 4 3 5 4
14. E U G I R F
3 2 8 0 5 4
(a) 4 8 0 2 3 5
(b) 5 4 3 0 8 2
(c) 8 0 2 3 5 4
(d) 4 0 8 2 5 3
15. I D E C R P E
3 2 7 5 4
(a) 4 3 2 3 7 3 5
(b) 7 5 3 4 3 2 3
(c) 4 5 3 7 3 2 3
(d) 5 3 7 3 2 3 4 2
16. U A F T A E B I
1 3 4 2 8 5 7 9
(a) 7 1 3 4 3 8 7 5 3
(b) 7 5 4 1 8 5 5 1 3
(c) 3 1 4 2 2 7 5 3 3
(d) 7 8 5 1 3 1 4 3 3
17. A C P A C L H I
1 3 9 7 5 8 6
(a) 9 5 1 3 8 6 3 1 7
(b) 5 1 9 6 3 8 3 1 7
(c) 5 1 3 6 9 8 3 1 7
(d) 5 3 1 6 9 8 2 7 1
18. E O C D D E
6 5 3 4
(a) 4 6 3 5 4 6
(b) 3 6 5 4 4 6
(c) 3 5 4 6 4 6
(d) 5 3 6 6 4 6
19. E O P N R
6 5 2 3 4
(a) 2 4 5 3 6
(b) 4 2 3 6 5
(c) 5 3 6 4 2
(d) 5 3 4 2 6
20. P E U O R E
4 5 3 2 1

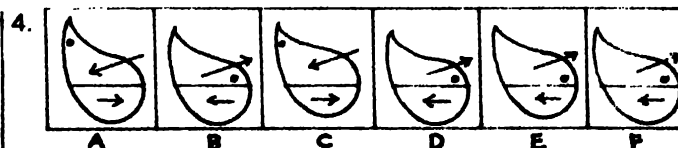
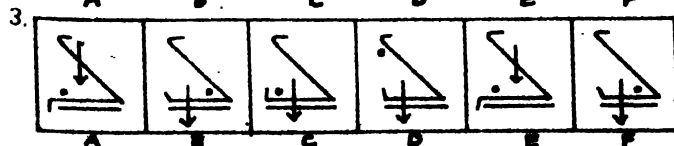
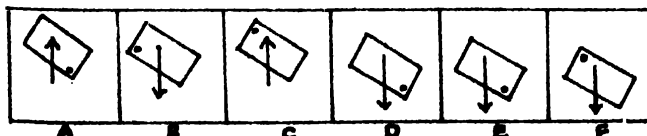
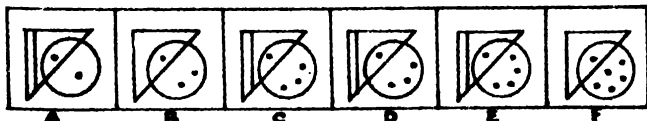
- (a) 5 3 2 1 4 3
(b) 3 4 2 1 5 3
(c) 5 3 1 2 4 3
(d) 1 3 3 2 5
21. ECIPLQ
5 3 2 3 4 5
(a) 5 2 3 4 3 5
(b) 3 5 4 2 3
(c) 4 2 3 5 3 5
(d) 3 5 3 5 2
- IV. Which of the following best represents the sequence in which the following words occur in the dictionary?
22. (1) bight (2) bikini (3) bright
(4) bilge (5) billion
(a) 1 2 3 4 5 (b) 2 1 4 5 3
(c) 1 2 4 5 3 (d) 1 4 3 5 2
- V. Arrange the following words in the descending alphabetic order, i.e., if serial numbers are read from right to left, it will form the dictionary sequence:
23. (1) disney (2) disorder (3) disown
(4) dismiss (5) dismount
(a) 4 5 3 2 1 (b) 2 3 5 4 1
(c) 3 2 4 1 5 (d) 3 2 1 4 5
(e) 3 2 1 5 4
- VI. Which of the following words will come exactly in the middle if they are arranged in alphabetic sequence in which they occur in the dictionary?
24. (1) gauche (2) gather (3) gaseous
(4) gastric (5) gaselier
(a) 1 (b) 2
(c) 3 (d) 4
(e) 5
- VII. Which of the following words will come last if they are arranged in alphabetic sequence as they appear in the dictionary?
25. (1) delegate (2) delicious (3) deliquesce
(4) delicatessen (5) delirious
(a) 2 (b) 3
(c) 5 (d) 4
(e) 1
- VIII. Which two letters of the English alphabet come exactly in the middle by counting 12 letters from the beginning and 12 letters from the end?

26. (a) LM (b) MN
(c) NM (d) NO
(e) KL
- IX. If you count 14 letters of the English alphabet from the end, which will be the 15th letter in the sequence?
27. (a) M (b) N
(c) L (d) K
(e) None of the above
- X. If you count the English alphabets backward 1-14 and then forward 1-14, which two letters will be 15th from forward and backward sequence respectively?
28. (a) LM (b) LO
(c) OL (d) PO
(e) NO
- XI. If the alphabetic order is reversed
29. Which will be the 13th letter from right?
(a) O (b) M
(c) N (d) L
(e) None of the above
30. Which will be the 13th letter from left?
(a) K (b) N
(c) M (d) L
(e) O
31. Which will be the 12th letter from right?
(a) O (b) N
(c) L (d) K
(e) None of the above
32. Which 2 letters will come exactly in the middle?
(a) ON (b) NM
(c) MN (d) ML
(e) LM
- XII. Arrange the following words in alphabetic order. Write the last letter of the word which comes first in the sequence. Equator/Equinox/Equivocal/Equity/Equilibrist
33. (a) E (b) Y
(c) R (d) X
(e) T
- XIII. **Directions:** From the set of figures given below, answer the questions 1

- to 5.
6 9 6 9 9 9 6 6 6 9 6 9 6 6 9 6 6
9 9 6 6 6
34. How many 9s are followed by 6 as well as preceded by 6?
(a) 5 (b) 4
(c) 3 (d) 7
35. How many 9s are only followed by 6?
(a) 3 (b) 4
(c) 6 (d) 8
36. How many 6s are followed by 9s as well as preceded by 9s?
(a) 3 (b) 2
(c) 4 (d) all
37. What is the total of 6s?
(a) 30 (b) 42
(c) 48 (d) 78
38. If the sum of all 6s is subtracted from the sum of all 9s, what figure will you get?
(a) 9 (b) 12
(c) 18 (d) 27
- XIV. From the following figures, answer the following questions:
7 8 9 7 6 5 3 4 2 8 9 7 2 4 5 9 2 9
7 6 4 0 7
39. How many 7s are preceded by 9 and followed by 6?
(a) 3 (b) 2
(c) 4 (d) all
40. Which figure is missing?
(a) 6 (b) 10
(c) 1 (d) 10
41. Which figure has been repeated maximum?
(a) 7 (b) 9
(c) 6 (d) all except 0
42. Which figures have equal frequency?
(a) 253 (b) 865
(c) 245 (d) None of the above
43. Leaving aside 0, which figure has the lowest frequency?
(a) 2 (b) 8
(c) 3 (d) 4

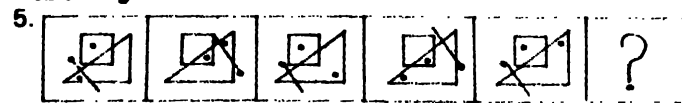
NON-VERBAL TESTS

Spot the odd one out among the following set of figures.

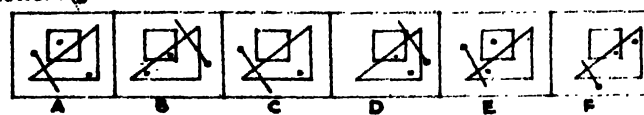


II. Name the serial number of the figure in the answer figures which will complete the series, i.e. fit in the last column of problem figure.

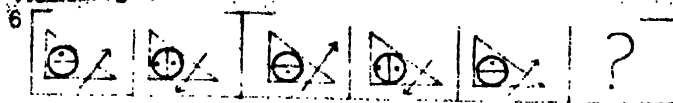
Problem Figure



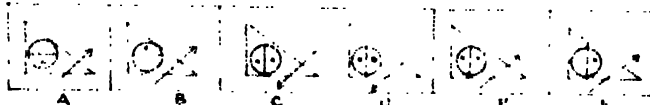
Answer Figure



Problem Figure



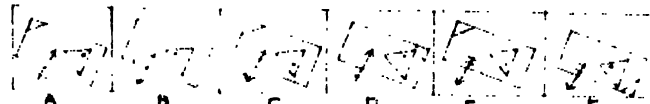
Answer Figure



Problem Figure

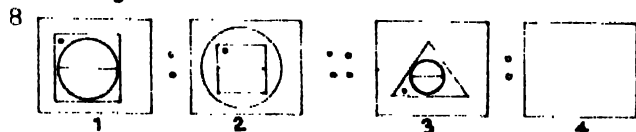


Answer Figure



III. Find the relationship/analogy in the first set (2 figures) of problem figure. Based on the same analogy, find the suitable figure from answer figure to fit in the blank space in the following questions:

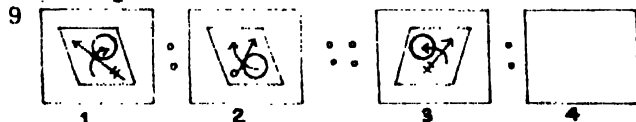
Problem Figure



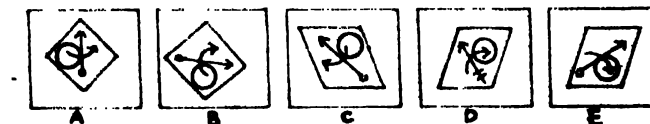
Answer Figure



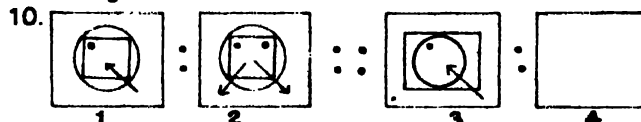
Problem Figure



Answer Figure



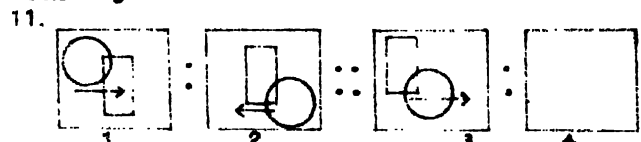
Problem Figure



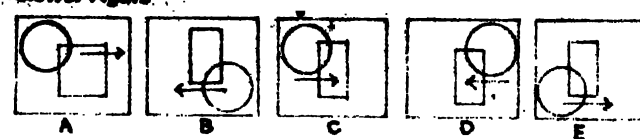
Answer Figure



Problem Figure

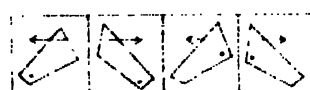


Answer Figure

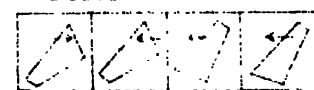


IV. In each of the following questions, there are three blocks of figures A, B and C. Two figures in Block C have some similarity with the figures/pattern in Block A. In Block B there are some figures that match with Block A or are similar/have same analogy. You have to select two figures from Block C which bear similarity or are based on the same analogy as that of Block A. Block B will help you to determine the correct answer.

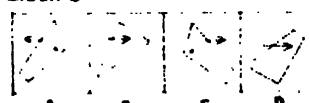
12. Block A



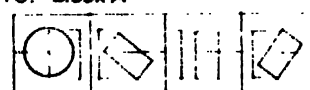
Block B



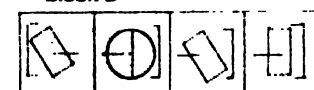
Block C



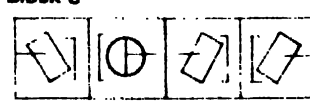
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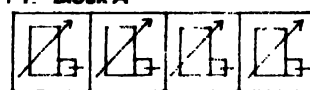
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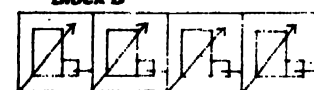
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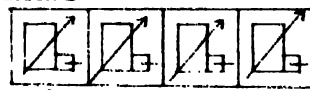
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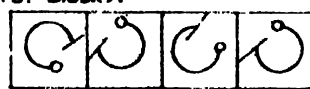
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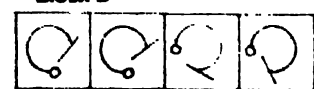
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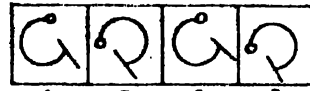
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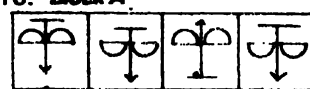
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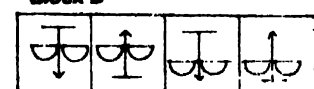
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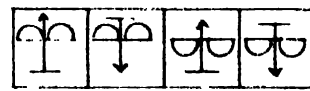
16. Block A



Block B



Block C



AN EYE-OPENER

A high-tech Israeli company called Xanadu Ltd has developed an ingenious gadget which sounds an alarm if a person falls asleep while driving, working at night or doing guard duty. This device weighs only about 16 gm, attaches easily to eyeglass frames and is operated by batteries that will last over 700 hours. When you involuntarily begin to steal some shut-eye, a tiny alarm pleasantly brings you back onto the job.

REASONING TESTS

I. **Directions:** In the following statements, a situation is explained in two premises, followed by a conclusion. Decide whether the

- (a) Conclusion necessarily follows from the statements
 - (b) Conclusion is only a long-drawn one
 - (c) Conclusion definitely does not follow from the statements
 - (d) Conclusion drawn is doubtful
- (Draw your answer only from within the statements)

1. Statements

- 1. Most of the dogs watch at night.
- 2. Ram's dog is a good breed.

Conclusion

Therefore, Ram's dog must be keeping watch at night.

- (a) (b) (c) (d)

2. Statements

- 1. The number of malaria cases is higher during the monsoons.
- 2. The period July to August is the rainy season in north India.

Conclusion

Therefore, malaria cases are less in number during the winter months in north India.

- (a) (b) (c) (d)

3. Statements

- 1. Animals generally cannot see in the dark.
- 2. Dogs are animals who keep a good watch.

Conclusion

But dogs cannot see at night.

- (a) (b) (c) (d)

4. Statements

- 1. To pass a Mental Ability test you need alertness and quickness.
- 2. Ramesh solves questions on Mental Ability very fast.

Conclusion

Therefore, Ramesh has the quality of both alertness and quickness.

- (a) (b) (c) (d)

5. Statements

- 1. All students studying in public schools are intelligent.
- 2. Rakesh studies in a public school.

Conclusion

Therefore, Rakesh is an intelligent student.

- (a) (b) (c) (d)

6. Statements

- 1. Ram is sitting to the right of Seema and Sunita.
- 2. Seema is sitting to the left of Sunita.

Conclusion

Therefore, Seema is not next to Ram but Sunita is in the middle of both.

- (a) (b) (c) (d)

Directions: In each of the following questions, two or three statements are given, followed by a conclusion. Examine the conclusion separately in the context of

the facts given and decide upon its degree of truth or falsity. Mark conclusions as follows:

- (a) Definitely true
- (b) Probably true
- (c) Data is insufficient
- (d) Probably false
- (e) Definitely false

7. Statements

- 1. Some of the government officials are said to be corrupt.
- 2. Ram Chander is a clerk in the post office.

Conclusion

Therefore, Ram Chander is corrupt.

- (a) (b) (c) (d)

8. Statements

- 1. Rusting of iron is a chemical action.
- 2. Rust damages the iron material

Conclusion

We should, therefore, save iron material from rusting.

- (a) (b) (c) (d)

9. Statements

- 1. Ram's father is a doctor.
- 2. Ram is concerned with suffering humanity.

Conclusion

Therefore, doctors are concerned with suffering humanity.

- (a) (b) (c) (d)

10. Statements

- 1. Roshan and Ram work in the same shift.
- 2. Rohit and Burman never work in the same shift.

Conclusion

Therefore, when Rohit works, Burman must work.

- (a) (b) (c) (d)

11. Statements

- 1. Foreign companies pay their employees well.
- 2. Gulati works in an international organisation.

Conclusion

Therefore, Gulati is a well-paid worker

- (a) (b) (c) (d)

12. Statements

- 1. Trees are very high on hills
- 2. This mountain peak is the highest in this country.

Conclusion

Therefore, trees here must be the highest in the country.

- (a) (b) (c) (d)

III. Directions: Each question below is followed by two arguments I & II. Determine which one of them is **strong** or **weak**. Then decide which of the answer choices that follow is correct:

- (a) Only statement I is strong
- (b) Only statement II is strong
- (c) Both the statements are strong
- (d) Either statement I or II is strong
- (e) Neither I nor II is strong

- 13. Should there be a strong Central Government leaving no powers with

the states?

- I. Yes, it will ensure peace and keep discipline in the country.
- II. No, freedom of people will vanish.

- (a) (b) (c) (d)

- 14. Should one prefer a job in a government department or in the private sector?

- I. Government jobs give security.
- II. Private sector pays well.

- (a) (b) (c) (d)

- 15. Should news be censored during communal disturbances?

- I. Yes, because, certain news is dangerous to unity and peace.
- II. No, it is unconstitutional and against the freedom of expression.

- (a) (b) (c) (d)

- 16. What is your opinion about news censorship during a normal political situation in the country?

- I. It is bad as some times certain developments will not be made known to the people and there would be no control on the happenings and activities.
- II. It is good because newsmen will be able to exploit news to create disturbances in the country

- (a) (b) (c) (d)

- 17. Which type of education is suitable for industrialisation?

- I. Scientific education is very essential.
- II. Technical education is necessary.

- (a) (b) (c) (d)

- IV. **Directions:** In the following questions, there is one statement which is followed by two conclusions. Find out which conclusion follows logically from the given statement and then decide which answer choice, marked (a), (b), (c), (d) & (e) is relevant and correct:

- (a) Only I follows
- (b) Only II follows
- (c) Both I and II follow
- (d) Either I or II follows
- (e) Neither I nor II follows

- 18. **Statement**

Days are smaller in winter. December and January are the coldest months in the north.

Conclusion

- I Summer is better than winter
- II Hill stations are crowded in summer

- (a) (b) (c) (d)

19. Statement

Surdas is known as the Milton of India

Conclusion

- I Because Surdas was a Hindi poet and Milton an English poet.
- II. Because both of them were blind poets.

- (a) (b) (c) (d)

20. Statement

X and Y are students of S.S. College. X studies Arts and Y studies

- I. They are similar in one aspect.
 - II. They are dissimilar in another aspect.
- (a) (b) (c) (d)

21. Statement

India has strengthened her nuclear power.

Conclusions

- I. India will explore possibilities to exploit nuclear power as a source of energy.
- II. India will be in a position to be at par with the developed world to make weapons.

(a) (b) (c) (d)

22. Statement

Private sector industries are profit-making in spite of several restrictions imposed on them by DGTD.

Conclusion

- I. Private sector industries work under restrictions from DGTD.
- II. Private sector industries employ skilled technicians.

(a) (b) (c) (d) (e)

23. Statement

X is a respectable member of society

Conclusion

I. Respected members are made members of the jury.

II. X, being a member of the jury, is infallible.

(a) (b) (c) (d) (e)

V. **Directions:** A situation is given in a few sentences in the form of statements followed by a conclusion.

Determine whether the

- (a) Conclusion is valid
- (b) Conclusion is long-drawn
- (c) Conclusion is invalid
- (d) Conclusion is doubtful

24. Statements

1. Singapore is in the east of India.
2. India is in the north of Sri Lanka.

Conclusion

Therefore, Singapore is exactly in the east of Sri Lanka

(a) (b) (c) (d)

25. Statements

1. If he studies now, he will clear the exam.

2. He does not study.

Conclusion

He will not clear the exam.

(a) (b) (c) (d)

charges levelled against him by B.

2. A is a member of the management team.

Conclusion

A found him guilty.

(a) (b) (c) (d)

27. Statements

1. If he has black money, he can be prosecuted by the income-tax department.

2. But he has no money.

Conclusion

Therefore, he cannot be prosecuted.

(a) (b) (c) (d)

28. Statements

1. Boys are more intelligent than the girls of the same age group.

2. Ramu is a boy and is 18 years of age.

Conclusion

Therefore, Ramu is more intelligent than any girl of his age.

(a) (b) (c) (d)

29. Statements

1. Five and four are odd and even.

2. Five and four are nine.

Conclusion

Therefore, nine is odd and even.

(a) (b) (c) (d)

General Knowledge

FOR NDA, CDSE, ASST'S GDE, ESE EXAMS

A general knowledge of world affairs and everyday observation and experience in scientific matters constitutes an essential section of exams like NDA, CDSE, Central Excise/Income-tax Inspector's Exam, Assistant's Grade Exam and Engineering Services Exam (ESE). The following set of questions should give you a fair idea of the type of questions you may expect in this section.

DIRECTIONS: For each of the following questions tick mark the choice that best answers the question. Answers are given at the end of these tests.

1. Who won the French Open men's singles title in 1985?
(a) John McEnroe (b) Mats Wilander
(c) Ivan Lendl (d) Jimmy Connors
(e) None of the above
2. Who directed *Damul* which won the National Award for the best feature film in 1985?
(a) Gautam Ghose (b) Prakash Jha
(c) Satyajit Ray (d) Mrinal Sen
(e) Govind Nihalani
3. The well-known economist and former member of the Planning Commission who died in Rome in 1985 was?
(a) Dr M.S. Swaminathan
(b) K.N. Raj
(c) Raj Krishna
(d) Hanumantha Rao
(e) Mohammad Fazal
4. Who was the first Mughal ruler in India?
(a) Humayun
(b) Muhammad-bin-Tughlaq
(c) Muhammad Ghori
(d) Babar
(e) Akbar
5. Who was the first Governor-General of India?
(a) Robert Clive
(b) Lord Cornwallis
(c) Lord Canning
(d) Lord Lytton
(e) Warren Hastings
6. Whose court did the Chinese pilgrim Hieun Tsang visit?
(a) Harsha Vardhana
(b) Chandragupta I
(c) Ashoka
(d) Vikramaditya
7. Who composed *Ramcharitmanas*?
(a) Kalidas (b) Amir Khusrau
(c) Abul Fazl (d) Tulsidas
(e) None of the above
8. The famous Indian mathematician and astronomer Aryabhata lived during the reign of
(a) Chandragupta Vikramaditya
(b) Chandragupta
(c) Ashoka
(d) Sher Shah Suri
(e) None of the above
9. What was the significance of the Battle of Kalinga (262 B.C.)?
(a) Ashoka lost his first battle
(b) Ashoka defeated Kalinga
(c) Ashoka gave up battles and became a Buddhist monk
(d) There was very little bloodshed
10. Afghan rule was established in north India after the
(a) I Battle of Panipat
(b) Battle of Kanauj
(c) Battle of Chausa
(d) II Battle of Panipat
(e) None of the above
11. Who was one of the greatest monarchs of south India known for his kindness to the fallen enemy, acts of mercy and charity and who encouraged the development of art and letters?
(a) Rajaraja Chola
(b) Pulakesin II
(c) Krishna Deva Raya
(e) None of the above

- (d) Malik Ambar
(e) None of the above
12. Who introduced Permanent Settlement in Bengal?
(a) Lord Wellesley
(b) Lord Canning
(c) Lord Cornwallis
(d) None of the above
13. Mahatma Gandhi joined the National Movement in the year
(a) 1917 (b) 1918
(c) 1921 (d) 1922
(e) None of the above
14. What prompted Gandhi to suspend the Non-Cooperation Movement in 1922?
(a) Killing of a British official
(b) Lack of support from the Muslim League
(c) Killing of 22 policemen without provocation
(d) Difference within the Congress
(e) None of the above
15. Who were the founders of the Swaraj Party?
(a) Chittaranjan Das and Subhash Chandra Bose
(b) Subhash Chandra Bose and Jawaharlal Nehru
(c) Sardar Patel and Jawaharlal Nehru
(d) Motilal Nehru and Chittaranjan Das
16. Subhash Chandra Bose resigned after he was re-elected President of the Indian National Congress in 1939 because of
(a) Personal reasons
(b) Opposition from Gandhi and other leaders
(c) Non-recognition by the British Government
(d) None of the above
- What was the purpose of the Cripps Mission?
(a) To go into the question of constitutional reforms
(b) To negotiate with Congress leaders on the transfer of power
(c) To convince Gandhi to participate in the Second Round Table Conference
(d) To secure cooperation of Indians in the war effort
- The Congress ministries resigned in 1939 because of (the)
(a) Involvement of India in World War II without consulting the Congress Party
(b) Arrest of Gandhi
(c) British Government's subtle moves to promote communal feelings
(d) None of the above
- When was the Planning Commission constituted?
(a) 1961 (b) 1952
(c) 1947 (d) 1951
(e) 1950
20. Who is the present Governor of Punjab?
(a) Jag Mohan
(b) Air Marshal (Rtd) I.H. Latif
(c) B.K. Nehru
(d) Arjun Singh
(e) None of the above
21. Who is the Chairman of the Planning Commission?
(a) Rajiv Gandhi
(b) Dr Manmohan Singh
(c) Narasimha Rao
(d) Prof M.G.K. Menon
(e) Dr C.H. Hanumantha Rao
22. When was oil first discovered in Assam?
(a) 1955 (b) 1895
(c) 1867 (d) 1925
(e) 1875
23. Who wrote the national song *Bande Matram*?
(a) Bipin Chandra Pal
(b) Subramania Bharati
(c) Surendranath Bannerjee
(d) Bankim Chandra Chatterjee
(e) None of the above
24. Who said, "Swaraj is my birthright and I shall have it"?
(a) Mahatma Gandhi
(b) Jawaharlal Nehru
(c) Subhash Chandra Bose
(d) Bal Gangadhar Tilak
(e) None of the above
25. Which is in the correct chronological order?
(a) Mauryas-Guptas-Slave Dynasty-Mughals
(b) Guptas-Mauryas-Slave Dynasty-Mughals
(c) Guptas-Mauryas-Mughals-Slave Dynasty
(d) Mauryas-Guptas-Mughals-Slave Dynasty
26. What was the motto of Swami Dayanand, founder of the Arya Samaj?
(a) Do *bhakti*
(b) Return to the Gita
(c) Read the Ramayana and the Mahabharata
(d) Return to the Vedas
(e) None of the above
27. Who was the foreigner who visited India in the Mauryan times?
(a) Megasthenes (b) Fahein
(c) Hieun Tsang (d) Alberuni
(e) None of the above
28. Which of the following rulers did not convert to Buddhism?
(a) Ashoka (b) Harsha
(c) Kanishka (d) Samudragupta
(e) All the above are converts
29. What was the most important element in the Charter Act 1853?
(a) Trade monopoly in India ended and trade with India was thrown open
(b) Power was transferred from East India Company to the British Crown
(c) The Governor-General's Council was enlarged
(d) Recruitment to the civil services were to be made through competitive exams
30. Which planet in the solar system has the longest winter?
(a) Saturn (b) Jupiter
(c) Uranus (d) Venus
(e) None of the above
31. The first man-made object to leave the solar system was
(a) Challenger (b) Salyut-7
(c) Salyut-6 (d) Soyuz
(e) Pioneer 10
32. Who were the first man and woman to go into space?
(a) Vladimir Komosov and Valentina Tereshkova
(b) Neil Armstrong and Svetlana Savitskaya
(c) Yuri Gagarin and Svetlana Savitskaya
(d) Yuri Gagarin and Valentina Tereshkova
33. Approximately, how many biogas plants are there in India?
(a) 10,000 (b) 30,000
(c) 50,000 (d) 75,000
(e) None of the above
34. The Plasma Physics Programme group at the Physical Research Laboratory, Ahmedabad, is carrying out research on the
(a) Easy disposal of radioactive wastes
(b) Possibility of conducting a fusion reaction in the laboratory
(c) Development of cheap nuclear power
(d) None of the above
35. The Antarctic krill is an important source of
(a) Cheap proteins for humans
(b) Feed to fatten fish
(c) Feed for livestock and poultry
(d) Vitamin E
36. India's manned station in the Antarctic is called
(a) Ganqa
(b) Dakshin Ganiga
(c) Dakshin Gangotri
(d) Dakshin Yamunotri
37. How many Articles are there in the Constitution of India?
(a) 405 (b) 400
(c) 395 (d) 390
(e) None of the above
38. The word 'socialist' was inserted in the preamble to the Constitution of India by the— Amendment Act.
(a) 28th (b) 32nd
(c) 39th (d) 42nd
(e) 47th
39. A federal constitution is one which provides for
(a) Only one Central Government

- (b) A government at the Centre which is supreme
(c) A government at the state-level
(d) A dual government with distribution of powers between the centre and the states
40. Which of the following is not a Fundamental Right?
(a) Right against Exploitation
(b) Right to Property
(c) Right to Constitutional Remedies
(d) Cultural and Educational Rights
41. In case of disagreement between the two Houses over a Bill
(a) The Lok Sabha is overruled
(b) The Rajya Sabha is overruled
(c) The PM exercises his/her discretion
(d) The President summons a joint session
42. Agriculture and family planning fall under the
(a) Union List and State List respectively
(b) State List and Concurrent List respectively
(c) Concurrent List (both)
(d) State List (both)
43. In the Concurrent List, if a law made by the Parliament comes into conflict with a law made by the state Legislature, the
(a) Latter prevails
(b) Former prevails
(c) President decides after consulting the Governor concerned
(d) None of the above
44. When was National Emergency first declared in India?
(a) Oct 26, 1962 (b) Nov 6, 1961
(c) Jan 10, 1968 (d) Dec 3, 1971
45. On which of the following grounds can an Emergency no longer be declared?
(a) External aggression
(b) Internal disturbance
(c) Armed rebellion
(d) Failure of the constitutional machinery in state
(e) Financial instability
46. The Asia Cup hockey tournament held in Dhaka from Jan 20-28 was won by
(a) India (b) Malaysia
(c) Singapore (d) Pakistan
47. Igneous rocks are those
(a) Formed by the solidification of molten rocks
(b) Formed by the action of wind and water
(c) Which undergo a pronounced change in their physical form due to heat and pressure
(d) Which are capable of producing fire when rubbed together vigorously
48. The Evening Star is.
(a) The first star to appear in the sky
- (b) The planet Saturn
(c) The planet Jupiter
(d) The planet Venus
49. The scheduled castes and tribes constitute—% of the total population in India.
(a) 5 (b) 7
(c) 13 (d) 21
(e) 25
50. The crop which earns the highest foreign exchange for India is
(a) Jute (b) Tea
(c) Cotton (d) Coffee
(e) Tobacco
51. Which city is known as the 'Venice of the East'?
(a) Singapore (b) Hong Kong
(c) Rangoon (d) Cochin
(e) Trivandrum
52. Which country is known as The Playground of Europe?
(a) Finland (b) Switzerland
(c) Britain (d) Spain
(e) Italy
53. Which of these rivers does not flow into the Bay of Bengal?
(a) Tapti (b) Mahanadi
(c) Godavari (d) Krishna
(e) Cauvery
54. Srinagar is located on the banks of river
(a) Beas (b) Sutlej
(c) Ravi (d) Jhelum
(e) Chenab
55. On the banks of which river and in which state is the Bhakra Dam located?
(a) Jhelum in J & K
(b) Chenab in Punjab
(c) Sutlej in Punjab
(d) Sutlej in Himachal Pradesh
(e) Beas in Punjab
56. Which metal is extracted from bauxite?
(a) Copper (b) Zinc
(c) Aluminium (d) Tin
(e) None of the above
57. Which state is the chief producer of cardamom?
(a) Kerala (b) Andhra Pradesh
(c) Tamil Nadu (d) Karnataka
(e) It's not grown any more in India
58. Which state grows the maximum number of poppy (opium plant)?
(a) Bihar (b) West Bengal
(c) Maharashtra (d) UP
(e) Not grown in India
59. Which state is the leading producer of zinc?
(a) Bihar (b) MP
(c) Gujarat (d) Rajasthan
(e) UP
60. Where is Cherrapunji (the place which has the heaviest rainfall) situated?
(a) Assam (b) Meghalaya
(c) Tripura (d) West Bengal
(e) Manipur
61. Who built the Jama Masjid (Delhi)?
- (a) Jahangir (b) Akbar
(c) Humayun (d) Shah Jahan
(e) Aurangzeb
62. Spot the odd one out:
(a) Jamshedpur (b) Bhilai
(c) Rourkela (d) Bokaro
(e) Dhanbad
63. What is Pushkar famous for?
(a) Holy place of Muslims—Dargah
(b) Ancient temples of Brahma
(c) A holy lake
(d) Temple Shiva
64. Who established Shantiniketan?
(a) Rabindranath Tagore
(b) Mahatma Gandhi
(c) Jawaharlal Nehru
(d) Subhash Chandra Bose
(e) None of the above
65. What is Jharia famous for?
(a) Coal mines
(b) Iron ore mines
(c) Mafia gangs
(d) Blindings committed by the police
66. Spot the odd one out:
(a) Rana Pratap Sagar (b) Tarapur
(c) Narora (d) Sriharikota
(e) Kalpakkam
67. Where was Mahatma Gandhi born?
(a) Ahmedabad (b) Dandi
(c) Porbandar (d) Vadodara
(e) None of the above
68. In which of these places outside Britain, has the full Commonwealth Summit or the Commonwealth Heads of Government Meeting (CHOGM) not been held so far?
(a) Ottawa (Canada)
(b) Kingston (Jamaica)
(c) Lusaka (Zambia)
(d) Perth (Australia)
(e) Singapore
69. When did the UN start functioning?
(a) Nov 5, 1945 (b) Oct 31, 1945
(c) Oct 31, 1946 (d) Oct 24, 1945
(e) Oct 24, 1946
70. Which one of these changes was not initiated by India in the Commonwealth?
(a) The King or Queen of Britain could not be the Head of the Commonwealth
(b) Republican countries could join the Commonwealth
(c) Non-white countries could join the Commonwealth
(d) The Commonwealth members increased numerically
71. Salman Rushdie's novel *Shame* is based on
(a) India (b) England
(c) Pakistan (d) USA
(e) USSR
72. Who is the youngest-ever cricket captain in Test history to lead his country?
(a) Gary Sobers (b) Kapil Dev
(c) Ian Botham (d) Ajit Wadekar
(e) Mansur Ali Khan Pataudi

73. Who is the highest wicket-taker in Test annals?
 (a) Bishan Singh Bedi
 (b) Freddie Trueman
 (c) Dennis Lillee (d) Lance Gibbs
 (e) Imran Khan
74. When was the first international Prudential World Cup held and who was the winner?
 (a) 1975—Australia
 (b) 1976—West Indies
 (c) 1975—West Indies
 (d) 1976—India
 (e) 1974—Australia
75. How many Os cars did *Gandhi* win?
 (a) Four (b) Six
 (c) Seven (d) Eight
 (e) Nine
76. Who is the first Indian to have won an Oscar?
 (a) Rohini Hattangadi
 (b) Shabana Azmi
 (c) Naseeruddin Shah
 (d) Bhanu Athaiya
 (e) Satyajit Ray
77. Where are the 1988 Olympics being held?
 (a) Beijing (b) Tokyo
 (c) Seoul (d) Singapore
 (e) Manila
78. What does deficiency of Vitamin A lead to?
 (a) Night blindness (b) Beri-beri
 (c) Scurvy (d) Rickets
 (e) Skin wrinkles
79. Which of these is a rabi crop?
 (a) Rice (b) Sugarcane
 (c) Oilseeds (d) Gram
 (e) Maize
80. Which crop has shown a decline in production/remained stagnant since independence?
 (a) Rice (b) Maize
 (c) Sugarcane (d) Pulses
 (e) Oilseeds
81. Which agency of the UN was set up in 1919 after the Treaty of Versailles?
 (a) WHO (b) ILO
 (c) UNCTAD (d) UNESCO
 (e) UNICEF
82. What are classified as super giants, normal giants, main sequence dwarfs and white dwarfs?
 (a) Stars (b) Countries
 (c) Men (d) Guerillas
 (e) Dinosaurs
83. With which country do you associate the "Great Leap Forward"?
 (a) Russia (b) India
 (c) Japan (d) China
 (e) USA
84. Who wrote *Wealth Of Nations*—a book based on modern economic thinking?
 (a) Karl Marx (b) P.A. Samuelson
 (c) J.M. Keynes (d) Adam Smith
 (e) Ricardo
85. Where does the International Court of

- Justice of the UN meet?
 (a) New York (b) Geneva
 (c) The Hague (d) Amsterdam
 (e) London
86. Mehmman Daruwala is associated with
 (a) Billiards (b) Snooker
 (c) Golf (d) Table tennis
 (e) Squash
87. The bat is distinct from other mammals because
 (a) It can't see
 (b) It lays eggs
 (c) It flies
 (d) It has a very shrill call
 (e) It hangs upside down
88. Gold Coast in Africa is the former name of
 (a) Ghana (b) Nigeria
 (c) Kenya (d) Congo
 (e) Ivory Coast
89. Which one of the following is not one of the great Lakes?
 (a) Lake Superior
 (b) Lake Michigan
 (c) Lake Ontario
 (d) Lake Huron
 (e) Great Salt Lake
90. On which of these Japanese islands is Tokyo located?
 (a) Kyushu (b) Shikoku
 (c) Honshu (d) Hokkaido
 (e) Sado
91. Which country receives the largest number of tourists every year?
 (a) Singapore (b) Switzerland
 (c) France (d) Spain
 (e) Greece
92. Mao Ze Dong wrote *The Red Book*. Who wrote *The Green Book*?
 (a) Winston Churchill
 (b) F.D. Roosevelt
 (c) Leonid Brezhnev
 (d) Col Gadaffi
 (e) Anwar Sadat
93. Which one of the following states was not merged into present-day Yugoslavia?
 (a) Serbia
 (b) Prussia

UNDER MUMMY'S HEAD

A Coptic antique manuscript, said to be the oldest complete manuscript of the Psalms of Prophet David, was recently unearthed during excavations at the Al-Mudil village in Egypt. This Book of Scriptures, dating back to the middle of the 5th century A.D., is perhaps the most important discovery of the 20th century. Being the first Torah text in the Coptic 'Pahansawi' dialect, it will help scholars ascertain characteristics of this dialect. Found in a wooden box under the head of a mummy, the book has been written on fine parchment of gazelle skin in black ink and protected by a wooden cover.

- (c) Slovenia
 (d) Bosnia-Herzegovina
 (e) Montenegro
94. Zealand is the former name of
 (a) Denmark (b) Netherlands
 (c) New Zealand (d) Belgium
 (e) Austria
95. The only wild life sanctuary in India where the Asiatic Lion can be found is in
 (a) Bharatpur
 (b) Corbet National Park
 (c) Gir
 (d) Dudhwa
 (e) Kanhe
96. Imaginary lines on maps joining places with equal atmospheric pressure are called
 (a) Isotherms (b) Isobaths
 (c) Isohyets (d) Isobars
 (e) Isocost
97. Which city is called the modern Babylon?
 (a) London (b) Venice
 (c) Geneva (d) Berne
 (e) Stockholm
98. Which Indian state in ancient times was known as Pragiyotisha?
 (a) Bihar (b) Assam
 (c) West Bengal (d) MP
 (e) None of the above
99. Which country is the birthplace of Mother Teresa?
 (a) Albania (b) Yugoslavia
 (c) Italy (d) Bulgaria
 (e) Greece
100. Which Shakespearean character speaks the maximum number of lines?
 (a) Hamlet (b) Richard III
 (c) Antony (d) King Lear
101. Where was plastic surgery first practised?
 (a) Sicily (b) India
 (c) Japan (d) China
 (e) America
102. Ireland is known as the Emerald Isle because
 (a) It has large deposits of emeralds
 (b) It has a lot of greenery
 (c) Because of its greenhouses
 (d) The water around it is green in colour
 (e) None of the above
103. In which country is Guaraní spoken?
 (a) Uruguay (b) Chile
 (c) Panama (d) Paraguay
 (e) Bolivia
104. Which one of these poets does not belong to the Lake School?
 (a) Wordsworth (b) Coleridge
 (c) Southey (d) Keats
105. St Petersburg was the former name of
 (a) Vladivostok (b) Leningrad
 (c) The Prague (d) Warsaw
 (e) Moscow

ARJUN SRIVASTAVA & V.K.

English

BY THE AARBEEES

FOR SCRA, ASST'S GDE, CDSE, NDA, GIC (AAO)

This section has been designed to help you brush up your knowledge of the English language and facilitate your preparation for the above mentioned exams.

DIRECTIONS: For each of the following questions, tick the choice that best answers the question. Answers are given at the end of these tests.

READING COMPREHENSION

I. Read the following passage and answer the questions that follow:

Sickness, madness, and premature death seem at first sight to be examples of waste of human materials. Here is a good worker who has been crippled in the prime of his life, a devoted mother who has died leaving orphaned children, a sensitive artist who has lost his reason. For the individuals most nearly concerned these are unmitigated tragedies. But from the point of view of the community there is always a redeeming feature if they are studied scientifically. Not only can an examination of such misfortunes save others from their like, but it may even help normal people to a better life.

For we scientists are not supermen. Far from it. We are somewhat more intelligent than the average, and a great deal more critical of our theories. But our minds work in the same way as other men's minds. The greatest living experimental physicist once said to me, "If we could see an inch in front of our noses we should discover the whole of physics in one generation." The man who said that can see, so to speak, a fraction of a millimetre in front of his own nose. Some of his experiments, which to others appeared as shots in the dark, were successful and revealed new principles. But most scientific theories are based on analogy with known facts, and careful experiments must be devised to see if they are correct, which they generally are not. We can only go step by step, and commonly only arrive at a general law by studying its most striking cases first.

The history of medicine is full of examples. It had long been known that some diseases were contagious. But it remained for Pasteur to show that the contagion was something alive. Later on Koch and others showed that a number of diseases such as cholera were car-

ried by water, and a proper organisation of the water supply has abolished them in civilised countries, whilst elsewhere, drinking water must be boiled or sterilised. Only very gradually, as the result of such successes, did the medical profession and the general public come to believe in the theory that most diseases are caused by living germs. In consequence, a search was made for the agents of diseases which are not obviously infectious.

1. The author regards physical and mental disease and death as
 - (a) something inevitable
 - (b) a wasteful phenomenon
 - (c) an absolute tragedy
 - (d) a mixed evil
2. The word *unmitigated* in the first paragraph means
 - (a) mixed
 - (b) severe
 - (c) doubtful
 - (d) unavoidable
3. 'For we scientists are not supermen.' This sentence implies that the author wants to
 - (a) insult scientists
 - (b) criticise fellow scientists
 - (c) uphold the dignity of scientists
 - (d) avoid any exaggerated claims about scientists
4. The author himself is a scientist.
 - (a) There is no evidence in the passage to prove it
 - (b) The first paragraph proves it
 - (c) The second paragraph has the evidence to prove it
 - (d) The last paragraph contains its proof
5. The last paragraph aims
 - (a) to prove that history of medicine can be useful for drawing all kinds of examples
 - (b) to show how only gradual steps beginning with very clear cases can lead to a general law
 - (c) to disprove the belief that some diseases are contagious
 - (d) to point at the importance of boiling or sterilising drinking water

PRECIS WRITING

II. Write a precis of the following passage

The immense and steady growth in the popularity of skiing had dotted the white slopes of every accessible range with ant-like figures. This needs little explanation. Few activities appeal on quite so many levels and to so many different instincts. It is a sport of infinite variety, varying not only from one 'run' to another, but from day to day, sometimes from hour to hour, with changing snow conditions. Thus, it never grows stale, for it knows no repetition. Also, it can never be wholly mastered: there is always room for discovery and improvement since the earth's surface is capricious and unpredictable. Every face, of every mountain presents new and unforeseen problems. As a sport it appeals equally to the novice and the expert, for each finds his challenge and his enjoyment on the slopes that suit him best. With the pleasures of companionship, it offers the freedom of constant and individual choice. You ski with people, yet without them. The track you trace is wholly your own, and at every instant depends on private initiative and judgement. Skiing appeals to the sense of speed, and can, in certain circumstances, appeal to the sense of danger, yet at the same time it affords deep aesthetic satisfaction. The skier inscribing fluid turns on a slope of untouched powder may guess at the more complex emotions of the inspired draughtsman. It might be added that skiing can also be the most elaborate form of exhibitionism devised by human vanity.

SPOTTING ERRORS

- III.1. Why you insist on going to Bombay,
a b
particularly at this time of the year?
c d
No error.
e
2. All that they are interested to do is
a b
give a big party to celebrate their
c d
victory. No error
e
3. It is getting increasingly fashionable
a
to profess deep interest in all kinds of
b c d
classical music. No error.
e
4. Very few people have the courage to
a
avail the opportunities created by the
b
rather liberal import policy of the
c

5. Soviet Russia has made ample provisions to look after young children by building health and pleasure resorts all over the country. No error.
6. She very casually remarked that she will not be a party to the conspiracy being hatched by them. No error.
7. Varanasi, Agra, Jaipur and other places of tourist interest should try to rid themselves of the great menace of beggars before they ask the Central government for more funds. No error.
8. India and China have no reason to be enemies, since they have had the best of relations since times immemorial. No error.
9. Do remember to ask her to return

- ted her secret mission in the country she is being sent to. No error.
10. It was due to my own fault that I got stuck up in the messy business of identifying the thief among a group of twenty suspects. No error.

SYNONYMS

- IV. Select the expression nearest in meaning to the word given at the top
- Expectorate**
 - have a strong wish for something
 - express in clear language
 - eject (by coughing or spitting)
 - exercise the muscles of the body
 - Matrix**
 - place in which thing is developed
 - mathematical puzzle
 - a statistical table
 - a complex diagram with figures
 - Obituary**
 - a health resort
 - a brief notice of death
 - a commercial advertisement
 - a place for burying the dead
 - Pageant**
 - spectacular procession
 - an illustrated page
 - a game of cards

- trade name for a drug
- name of a Greek warrior
- platform for public speaking
- the inner hall of a building

ANTONYMS

- V. Select the word or expression most opposite in meaning to the one given at the top.
- Clumsy**
 - tactful
 - brilliant
 - intelligent
 - cheerful
 - Debar**
 - accept as true
 - include for admission
 - allow to go
 - welcome to a party
 - Explicit**
 - that which is explained
 - that which is included
 - that which is implied
 - that which is negated
 - Generally**
 - never
 - exceptionally
 - sometimes
 - rarely
 - Outrageous**
 - peaceful
 - non-violent
 - innocent
 - moral

ANSWERS Test Of Reasoning Verbal

- (d) All words have EAD common except in (d) which ends EAT.
- (a) All have ILL common except (a).
- (e) All end in ENT except Land.
- (a) All end in ATE except Prone
- (e) All words have the common letters EAL in some position or the other but they are not found in BLISS.
- (e) All words contain ANK except CHUNK.
- (c) Two letters of the beginning and two of the end (in alphabetic sequence) are taken each time. Therefore, after WX of the end, EF of the beginning sequence should follow.
- (c) Three letters of the beginning and three of the end are taken each time. Therefore, DEF of the beginning should be followed by UVW of the end
- (b) Three letters are taken in reverse order each time.
- (c) Preceding three letters are omitted, i.e., ABC is omitted, DEF is retained. GHI is omitted, JKL is retained; and so on.
- (b) Combinations of the first and the last letters of alphabet, i.e., one of the beginning and one of the last are chosen.
- (b) Letters are arranged in sets of 4, i.e., ABCD. In the next group B is retained followed by the next 3 letters in the natural sequence of the English alphabet. In the next group C is retained, followed by next 3 letters and so on.

- | | | |
|-----------------------|-------------------|-----------------|
| III. 13. (c) DESIGNED | 14. (d) FIGURE | 15. (c) PRECEDE |
| 16. (b) BEAUTIFUL | 17. (a) PRACTICAL | 18. (a) DECODE |
| 19. (a) PRONE | 20. (c) EUROPE | 21. (b) POLICE |
| IV. 22. (c) | V. 23. (e) | VI. 24. (d) |
| VII. 25. (c) | VIII. 26. (b) | IX. 27. (c) |
| X. 28. (c) | XI. 29. (c) | 30. (c) |
| 31. (a) | 32. (b) | |
| XII. 33. (c) | XIII. 34. (c) | 35. (c) |
| 36. (b) | 37. (d) | 38. (b) |
| XIV. 39. (b) | 40. (c) | 41. (a) |
| 42. (b) | 43. (c) | |

Non-Verbal

1. D- The number of dots in the circular portion outside the triangle is increasing. Double vertical line is in first figure A and then appears in alternate figure C. Based on this, D is odd here.
 2. C- Note direction of the arrow, movement of the dot around the main figure and outward opening of open triangular diagram (main figure) is also following a set pattern. Based on these characteristics, figure C is odd here.
 3. E- Here note the direction of the arrow and the movement of dots. In all, dots are moving clockwise and the arrow alternatively pointing inside and outside. Based on these characteristics, figure E is odd here.
 4. E- There is a specific pattern of directions of arrows on the top and bottom of the main figure and also in the movement of the dot above horizontal line in the figure. Based on this pattern, figure E is the odd one.
5. D- Note movement of the dot in triangle clockwise.

square figure is moving in and out of the triangular figure. The line with dot (pin) is also moving in a regular pattern from one figure to the other. Figure D of answer column fits in the blank column in the problem figure.

6. D- Note the change of direction of line inside the circle in the triangle and the number of dots in the circles and movement of the dot in circles having a vertical line across. Figure D in answer column fits in the blank column following the pattern of preceding figures.
7. A- Note movement of arrow inside/outside the rectangular figure, movement of dot in the triangle inside and the small line moving from one corner to the other. Figure A from answer column follows the same pattern and completes the series based on the analogy of preceding figures of the problem column.
- III 8. E- In figure 1 circle is inside the square and in figure 2 the square is inside the circle with a change in the dot movement and both have a horizontal line. Based on this analogy, figure E fits in the blank column in the problem figure.
9. C- Change in direction, movement of arrows and circle in the rectangular figures is obvious in figures 1 and 2. Based on relationship, figure C relates to figure 3 in the problem column.
10. B- Direction of arrow and dot have relationship in figures 1 and 2 of the problem figure. Based on the same analogy, figure B relates to figure 4 of the problem figure.
11. D- After matching figures 1 and 2 in the problem figure, you will note that figure D correlates with figure 3 in the problem figure and as such fits in the blank column in the problem figure. Note changing direction of circle, rectangular figure and arrows.
- IV. 12. A & C Keeping in view the leaning of main figures and the direction of arrows and position of dots in Block A, figures A and C follow same pattern in Block C.
13. A & D In Block A the horizontal lines passing through all figures are touching one side of the frame. In Block B these lines are not touching the frame. In Block C figures A and D are touching the frame.
14. A & C In Block A arrows crossing the figures are not touching the outside frame. In Block B the arrows are in same direction but touching the frame. In Block C figures A and C do not touch the frame and as such have correlation with figures of Block A.
15. C & D In Block A, straight lines on the semicircular figures are touching one side of the frame. In Block B this is not the case. In Block C, figures C and D follow similar pattern as in Block A.
16. A & D In Block A, semicircular figures are alternatively turning upside down. The arrow follows the same pattern. In Block B, semicircular figures have the same direction in all the columns but the arrows are turning in the alternative columns. In Block C, figures A and D follow the pattern of Block A.

Reasoning

- I 1. (d) Most does not include all. Ram's dog may not be included in "most". Thus, the conclusion is doubtful.
2. (a) Both statements help to make the conclusion correct.

- II. 7. (e) The word "some" excludes Ram.
8. (a) It is true.
9. (e) It is definitely false.
10. (e) It is definitely false.
11. (a) It is true.
12. (b) May or may not be found doubtful but cannot be also false or absolutely true.
- III. 13. (a) 14. (c)
15. (a) The second argument is weak as it does not favour welfare and peace of the country.
16. (b)
17. (c) Both are strong because 1 depends on 2.
- IV. 18. (e) Conclusions are not relevant to the statements.
19. (b)
20. (c) Both I and II follow from the statements
21. (d)
22. (a)
23. (a) Being a member of jury does not mean that he is infallible.
- V. 24. (d) Non-transitive relationship.
25. (c) Fallacy of denying antecedent.
26. (c) Fallacy of division. Collective action cannot be an individual's action.
27. (c) Fallacy of denying the antecedent.
28. (b) Probably true because the possibility of the boy being more intelligent than the girl is there. The conclusion is long-drawn.
29. (c) Fallacy of composition.

General Knowledge

- | | | | | | |
|----------|----------|----------|----------|----------|----------|
| 1. (b) | 2. (b) | 3. (c) | 4. (d) | 5. (e) | 6. (a) |
| 7. (d) | 8. (a) | 9. (c) | 10. (b) | 11. (c) | 12. (c) |
| 13. (e) | 14. (c) | 15. (d) | 16. (b) | 17. (d) | 18. (a) |
| 19. (e) | 20. (d) | 21. (a) | 22. (c) | 23. (d) | 24. (d) |
| 25. (a) | 26. (d) | 27. (a) | 28. (d) | 29. (d) | 30. (c) |
| 31. (e) | 32. (d) | 33. (d) | 34. (b) | 35. (a) | 36. (c) |
| 37. (c) | 38. (d) | 39. (d) | 40. (b) | 41. (d) | 42. (b) |
| 43. (b) | 44. (a) | 45. (b) | 46. (d) | 47. (a) | 48. (d) |
| 49. (d) | 50. (a) | 51. (d) | 52. (b) | 53. (a) | 54. (d) |
| 55. (c) | 56. (c) | 57. (d) | 58. (d) | 59. (d) | 60. (b) |
| 61. (d) | 62. (e) | 63. (b) | 64. (a) | 65. (a) | 66. (d) |
| 67. (c) | 68. (d) | 69. (d) | 70. (a) | 71. (c) | 72. (e) |
| 73. (c) | 74. (c) | 75. (d) | 76. (d) | 77. (c) | 78. (a) |
| 79. (d) | 80. (d) | 81. (b) | 82. (a) | 83. (d) | 84. (d) |
| 85. (c) | 86. (e) | 87. (c) | 88. (a) | 89. (e) | 90. (c) |
| 91. (d) | 92. (d) | 93. (b) | 94. (a) | 95. (c) | 96. (d) |
| 97. (a) | 98. (b) | 99. (a) | 100. (a) | 101. (b) | 102. (c) |
| 103. (a) | 104. (d) | 105. (b) | | | |

English

- I. 1. (d) 2. (b) 3. (d) 4. (c) 5. (b)
- II. There are several reasons for the continuing growth in the popularity of skiing. It can please people of diverse tastes. It is free from monotony and it always leaves some scope for new experience and fresh achievement. Moreover, it is liked both by the initiated and the beginner. Further, one has all the freedom either to do it alone or to do it in the company of others. Lastly, it satisfies a wide variety of urges and dispositions—those of individual initiative, speed, adventure, aesthetics, ostentation and quiet, solitary enjoyment.
- III. 1. (a) 2. (b) 3. (e) 4. (b) 5. (b)
6. (b) 7. (a) 8. (d) 9. (b) 10. (b)
- IV. 1. (c) 2. (a) 3. (b) 4. (a) 5. (d)
- V. 1. (a) 2. (b) 3. (c) 4. (c) 5. (d)

Numerical Ability

H. SAKUNA

FOR SCRA, NDA, CDSE, ASST'S GRADE, CLERKS' GRADE EXAMS

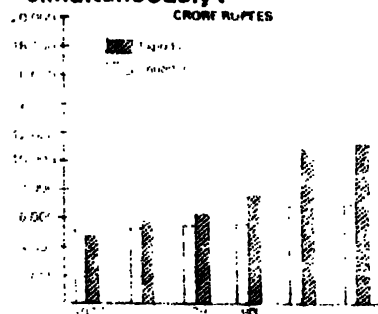
This section is specially formulated for those appearing in the SCRA, Assistant's Grade, CDSE, NDA and Clerks' Grade exams.

DIRECTIONS: Tick mark the choice that best answers each question. Answers with explanations appear at the end of this test.

- $.0030 + .007 = ?$
(a) .0037 (b) .0370
(c) .0073 (d) .730
(e) .01
- $39,758 + 4,372 = ?$
(a) 43,130 (b) 44,120
(c) 44,130 (d) 44,030
(e) None of the above.
- $31,471 \times 99 = ?$
(a) 31,47,099
(b) 31,15,629
(c) 31,15,699
(d) 31,78,571
(e) None of the above
- $\frac{3.0}{5} + \frac{3.5}{7} + \frac{6.4}{4} = ?$
(a) $\frac{12.9}{140}$ (b) $\frac{12.9}{16}$
(c) 80 (d) 2.7
(e) .27
- $(56)^2 - (44)^2 = ?$
(a) 12 (b) 144
(c) 1,200 (d) 14,400
(e) 120
- If written in the ascending order, which of the following fractions will come first?
 $\frac{7}{4}, \frac{19}{9}, \frac{31}{11}, \frac{23}{7}, \frac{29}{13}$
(a) $\frac{7}{4}$ (b) $\frac{19}{9}$
(c) $\frac{31}{11}$ (d) $\frac{33}{7}$
(e) $\frac{29}{13}$
- What is 25% of 20% of 120?
(a) 60 (b) 6
(c) 96 (d) 56
(e) None of the above
- $17 + 13 \times 11 - 21 = ?$
(a) 309 (b) 139
(c) -300 (d) 339
(e) None of the above.
- .01% of 100 = ?
(a) 1 (b) .01
(c) 1.01 (d) .0001
(e) 1.001
- $6:7 :: 10 : 35$
(a) 12 (b) 21
(c) 7 (d) 42
(e) None of the above
- If 10 persons can do a piece of work in 8 days, working 16 hours a day; how long will 16 persons take to do the same work, working 8 hours a day?
(a) 12 days (b) 24 days
(c) 80 days (d) 10 days
(e) None of the above
- Ram, Shyam and Suresh enter into a partnership. Ram puts in Rs 200, Shyam puts in Rs 300 and Suresh puts in Rs 400. They earn a profit of Rs 279. If the profit is to be shared in the same proportion as the investment, then how much money would Suresh receive?
(a) Rs 62 (b) Rs 93
(c) Rs 124 (d) Rs 83
(e) None of the above
- In a certain examination 50 marks are required to pass the Mathematics paper. A student secures 50 marks and as a consequence fails by 50 marks. Find the maximum marks obtainable.
(a) 100 (b) 150
(c) 200 (d) 250
(e) 300
- A second-hand car dealer purchases a car for Rs 10,000. He wishes to 'mark' the car in such a way that he may earn a profit of 20% after giving a discount of 20% on the marked price. What should be the marked price of the car?
(a) 10,000 (b) 12,000
(c) 15,000 (d) 16,000
(e) None of the above
- A shopkeeper stocks two

quantities of sugar priced at Rs 5 and Rs 8 per kg. In what proportion should he mix the cheap sugar with the dear sugar to obtain a mixture worth Rs 6 per kg?

- (a) 1:2 (b) 2:1
(c) 3:1 (d) 1:1.5
(e) None of the above
- A person's gross income is Rs 30,000 in a certain year. The going income tax rate is 12% and the first Rs 6,000 are exempted from tax. Find the net income after tax.
(a) Rs 3,600
(b) Rs 2,880
(c) Rs 26,400
(d) Rs 27,120
(e) Rs 21,120
- A man goes from city A to city B which is at a distance of 200 km with a speed of 50 km/hour, and comes back with a speed of 40 km/hour. Find his average speed during the journey.
(a) 45 km/hour
(b) 44.4 km/hour
(c) 44 km/hour
(d) 42 km/hour
(e) 41.5 km/hour.
- Two men are running towards each other on a 140 metre long track at speeds 8 km/sec and 6 km/sec respectively. After how much time will they meet?
(a) 8 sec
(b) 10 sec
(c) 15 sec
(d) 35 sec
(e) 70 sec
- Ramesh earns Rs 3,000 per month. Fifteen per cent of his income is spent on house rent. Of the rest, he deposits 20% in a bank. How much does Ramesh save annually?
(a) Rs 450 (b) Rs 2,550
(c) Rs 510 (d) Rs 6,120
(e) None of the above
- A tap can fill a tank in 5 hours, while an outflow tap can empty it in 8 hours. In how many hours would the tank be filled if both the taps operate simultaneously?



(a) 13 hours (b) 3 hours

(e) Tank would never be filled
Directions: The bar chart 'A' shows India's foreign trade i.e. exports and imports for the period 1977-1982.

On the basis of this bar chart answer the questions 21-25.

21. During the period 1977-1982, how many times were India's imports less than its exports?
 (a) One (b) Two
 (c) Three (d) Four
 (e) Five
22. The difference between India's exports and imports during the year 1977 was approximately
 (a) Rs 500 crore
 (b) Rs 1,000 crore
 (c) Rs 2,000 crore
 (d) Rs 4,000 crore
 (e) Can't be determined from the chart
23. What was the percentage rise

(approximate) in Indian exports during 1981 over the exports of 1980?

- (a) 15%
 (b) 20%
 (c) 24%
 (d) 30%
 (e) 37%
24. Imports in the year 1981 were approximately what percentage of the imports in 1977?
 (a) 250% (b) 150%
 (c) 140% (d) 40%
 (e) None of the above
25. In which year was the percentage growth of exports over the previous year the highest?
 (a) 1982 (b) 1981
 (c) 1980 (d) 1979
 (e) 1978
- Directions:** In the following questions indicate the number which does not belong to the respective series.

26. $\frac{17}{61}, \frac{16}{128}, \frac{15}{195}, \frac{14}{238}, \frac{13}{399}$
 (a) $\frac{17}{51}$ (b) $\frac{16}{128}$
 (c) $\frac{15}{195}$ (d) $\frac{14}{238}$
 (e) $\frac{13}{299}$
27. 21, 42, 189, 567, 1701.
 (a) 21 (b) 42
 (c) 189 (d) 567
 (e) 1701
28. 35, 68, 101, 134, 170.
 (a) 35 (b) 68
 (c) 101 (d) 134
 (e) 170
29. 305, 232, 162, 86, 13.
 (a) 305 (b) 232
 (c) 162 (d) 86
 (e) 13
30. 915, 405, 135, 45, 15.
 (a) 915 (b) 405
 (c) 135 (d) 45
 (e) 15

ANSWERS

1. (c)
$$\begin{array}{r} + 0.0030 \\ + 0.0070 \\ \hline 0.0100 \end{array} = 0.01$$

2. (c)
$$\begin{array}{r} 39,758 \\ 4,372 \\ \hline 44,130 \end{array}$$

3. (b) $31,471 \times 99 = ?$
 99 can be written as $100-1$
 so $31,471 \times 99 = 31,471 \times (100-1)$
 $= 31,47,100 - 31,471$
 $= 31,15,629$

4. (d) **Method I:**
$$\begin{array}{r} 3.0 + 3.5 + 6.4 \\ 5 \quad 7 \quad 4 \\ \hline 84.0 + 70.0 + 224.0 \\ 140 \quad \quad \quad \\ \hline 378 \\ 140 \quad \quad \quad \\ \hline = 2.7 \end{array}$$
 (L.C.M. of 5, 7 and 4 is 140)

Method II: Just on inspection we see that all the fractions can be easily reduced to decimal numbers:

$$\begin{array}{r} 3.0 + 3.5 + 6.4 \\ 5 + 7 + 4 \\ \hline = 0.6 + 0.5 + 1.6 = 2.7 \end{array}$$

5. (c) A simple algebraic formula is $a^2 - b^2 = (a+b) \times (a-b)$
 $56^2 - 44^2$
 $= (56+44) \times (56-44)$
 $= (100) \times (12) = 1200$

6. (a) **Method I:** $\frac{1}{4}, \frac{1}{9}, \frac{1}{11}, \frac{1}{13}, \frac{1}{17}$
 To do the comparison between these numbers they should be reduced to a common denominator, (which would be the LCM of all the individual denominators) LCM of 4, 9, 11, 7, 13 would be 36,036
 All the fractions can be reduced to this common denominator using the following method. Let us take $\frac{1}{4}$
 Divide 36,036 by 4 i.e. $36,036 \div 4 = 9,009$
 Multiply 7 with 9,009 i.e. $9,009 \times 7 = 63,063$

So $\frac{7}{4} = \frac{63,063}{36,036}$

Similarly other numbers can be reduced to give

$$\begin{array}{r} 19 = \frac{76,076}{36,036} \\ 9 = \frac{36,036}{36,036} \\ 31 = \frac{1,01,556}{36,036} \\ 11 = \frac{36,036}{36,036} \\ 23 = \frac{1,18,404}{36,036} \\ 7 = \frac{36,036}{36,036} \\ 29 = \frac{80,388}{36,036} \\ 13 = \frac{36,036}{36,036} \end{array}$$

Clearly, out of all these numbers $\frac{63,063}{36,036}$ is the smallest and so should come first in the ascending order.

Method II: A quicker and simpler method is to reduce the fractions to decimal numbers and then compare them as follows

$$\begin{array}{r} \frac{1}{4} = 1.7 \\ \frac{1}{9} = 2.1 \\ \frac{1}{11} = 2.8 \\ \frac{1}{7} = 3.2 \\ \frac{1}{13} = 2.2 \end{array}$$

On comparison we see that 1.7 i.e. $\frac{1}{4}$ is the smallest number and so should come first if the numbers are written in ascending order.

7. (b) Let us treat the solution in steps
 25% of (20% of 120) = ?

25% of $(\frac{20}{100} \times 120)$
 $= \frac{25}{100} \times (\frac{20}{100} \times 120)$
 or 25% of 20% of 120 can be written as $\frac{25}{100} \times \frac{20}{100} \times 120 = 6$

8. (b) This question is to be solved using the order BODMAS i.e.

B: Bracket
 O: Of
 D: Division
 M: Multiplication
 A: Addition

This means that the operations should be performed in the following order

1st step: Solve the expressions within the inner-most bracket

2nd step : Perform all operations connected with 'of'

3rd step : Perform all divisions

4th step : Perform all multiplications

5th step : Perform all additions

6th step : Perform all subtractions

Now let us solve $17 + 13 \times 11 - 21$

Here the first step to be performed is multiplication, i.e. $160 - 21 = 139$

9. (b) .01% of 100

$$= \frac{.01}{100} \times 100 = .01$$

10. (b) $6 : 7 :: 10 : 35$

$$6 : x :: 10 : 35$$

$$\frac{6}{x} = \frac{10}{35} \text{ i.e. } 6 \times 35 = 10x$$

$$\frac{6 \times 35}{10} = x \text{ or } \frac{210}{10} = x$$

$$21 = x$$

11. (d) The key to solving this type of question is that all quantities should be converted to common units. Here 10 persons are working in a day so, 1 day = 10 man days. Each person is working 16 hours a day i.e. 1 man day = 16 hours or 1 day = 10 man days = $10 \times 16 = 160$ man hours. Work is finished in 8 days i.e. $8 \times 160 = 1280$ man hours

So the work requires 1280 man hours in all. Now there are 16 persons. So 1 day = 16 man days. Each person works for 8 hours in a day So 1 man day = 8 hours

$$1 \text{ day} = 16 \text{ man days} = 16 \times 8 = 128 \text{ man hours.}$$

We have calculated above that the work requires 1280 man hours in all.

$$128 \text{ man hours} = 1 \text{ day}$$

$$1 \text{ man hours} = \frac{1}{128} \text{ day}$$

$$1280 \text{ man hours} = \frac{1}{128} \times 1280 = 10 \text{ days}$$

12. (c) Ram's investment = Rs 200

Shyam's investment = Rs 300

Suresh's investment = Rs 400

Total 900

$$\text{Suresh's share in investment} = \frac{400}{900} = \frac{4}{9}$$

Suresh's share in profit would also be $\frac{4}{9}$ of the

$$\text{total profit, i.e. } \frac{4}{9} \times 279 = 124$$

13. (c) Marks obtained by the student = 50

Marks by which he failed. = 50

So passing Marks = 100

Passing marks are 50% of the maximum marks.

50% of Maximum marks = 100

1% of Maximum marks = 100

50

100% of maximum marks

$$\text{i.e. maximum marks} = \frac{100}{50} \times 100 = 200.$$

14. (c) Let us assume that the cost of the car is

Rs 100 Desired profit = 20%

So selling price should be Rs 100 + Rs 20 = Rs 120.

But the dealer wants to offer 20% discount also. If marked price = Rs 100

Discount 20% = Rs 20

Selling price = Rs 100 - Rs 20 = Rs 80.

If selling price is Rs 80, marked price should be Rs 100

If selling price is Re 1 marked price should be $\frac{100}{80}$

If selling price is Rs 120, marked price should be $\frac{100}{80} \times 120 = \text{Rs } 150$

We have assumed that the cost of the car is Rs 100. So if cost of the car is Rs 100, marked price should be Rs 150.

If cost of the car is Re 1, marked price should be $\frac{150}{100}$

If cost of the car is Rs 10,000 marked price should be $\frac{150}{100} \times 10,000 = 15,000$.

15. (b) The easiest way to solve this type of questions is to write all the figures in the following fashion.

Step I

Cheapsugar Dear sugar

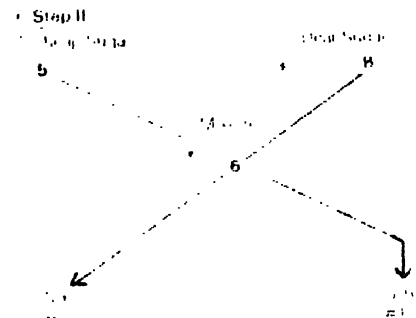
Rs 5 Rs 8

Mixture

Rs 6

Step II

Cheap Sugar Dear Sugar



Cheap sugar and dear sugar should be mixed in the ratio 2:1

16. (d) Gross income = Rs 30,000

Income exempted from tax = Rs 6,000

Taxable income = Rs 24,000

Tax rate = 12%

Tax = $\frac{12}{100} \times 24,000 = 2880$

Net income = Gross Income - Tax

$$= 30,000 - 2880 = \text{Rs } 27,120$$

17. (b) Average speed = $\frac{\text{Total distance}}{\text{Total time}}$

Total distance = 200 km for going + 200 km for coming = 400 km.

Time = $\frac{\text{Distance}}{\text{speed}}$

Time for going = $\frac{200}{50} = 4 \text{ hours}$

Time for coming = $\frac{200}{40} = 5 \text{ hours}$

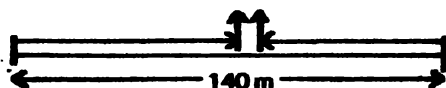
Total time = 4 + 5 = 9 hours

Average speed = $\frac{400}{9} = 44.4 \text{ km/hour}$

18. (b) When the two persons meet on the track they have traversed a total distance

of 140 m. Since they are running towards each other their relative speed would be $8+6=14$ m/sec.

$$\text{Time} = \frac{\text{Distance}}{\text{speed}} = \frac{140}{14} = 10 \text{ sec.}$$



19. (d) Ramesh's earnings = Rs 3,000 per month
House rent spent = $15\% = \frac{15}{100} \times 3000 = 450$

Earnings—House rent = $3000-450 = 2550$

Savings per month = 20% of 2550

$$\text{i.e. } \frac{20}{100} \times 2550 = 510$$

Annual savings = $510 \times 12 = \text{Rs } 6120$.

20. (b) In 5 hours the tap can fill the tank completely. In 1 hour the tap can fill $\frac{1}{5}$ th of the tank. In 8 hours the outflow tap can empty the complete tank. In 1 hour the outflow tap can empty $\frac{1}{8}$ th of the tank. So in 1 hour the tank would be filled $(\frac{1}{5} - \frac{1}{8})$ parts.
$$= \frac{8-5}{40} = \frac{3}{40}$$

$\frac{3}{40}$ th of the tank is filled in 1 hour

Therefore one complete tank would be filled in $\frac{40}{3}$ hours.

21. (a) Only in 1977 the shaded bar is shorter than the unshaded bar which means the imports were less than exports.
22. (a) in 1977 Exports = Rs 5,000 crores (approximately)
Imports = Rs 4,500 crores (approximately)
Difference = Rs 500 crores (approximately)
23. (d) Exports in 1981 = Rs 12,500 crores.
Exports in 1980 = Rs 9,500 crores.
Change = Rs 3,000 crores.
Percentage rise over 1980 = $\frac{3,000}{9,500} \times 100 \approx 31\%$
24. (c) Imports in 1981 = Rs 7,000 crores
Imports in 1977 = Rs 5,000 crores.
Imports in 1981 = $\frac{7,000}{5,000} \times 100 = 140\%$ of the imports in 1977.
25. (c) To answer the question first we have to find the percentage growth for all the years and then choose the year with maximum growth. But a simpler method is to draw an imaginary line joining the mid-points of the tops of the bars as shown below.
The segment where this line has the maximum slope or is steepest is the segment where growth rate has been maximum. As we see the line segment joining 1979,

80 and 81 is the steepest so we consider only these years.

Exports in 1981 = Rs 12,500 crores
Exports in 1980 = Rs 9,500 crores:
Change = Rs 3,000 crores.

Percentage change = $\frac{3,000}{9,500} \times 100 = 31\%$

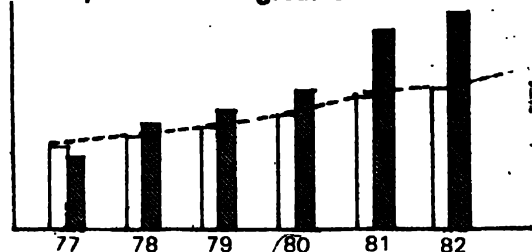
Exports in 1980 = Rs 9,500 crores.

Exports in 1979 = Rs 7,000 crores.

Change = Rs 2,500 crores.

Percentage change = $\frac{2,500}{7,000} \times 100 = 35\%$

So growth rate in the year 1980 over the previous year was the greatest.



26. (d) $\frac{17}{51}, \frac{16}{128}, \frac{15}{195}, \frac{14}{239}, \frac{13}{299}$
 $= \frac{1}{3}, \frac{1}{8}, \frac{1}{13}, \frac{1}{17}, \frac{1}{23}$

Reciprocals of these numbers are

3, 8, 13, 17, 23

These numbers form an arithmetic series with a common difference 5 i.e. $3+5=8$; $8+5=13$; $13+5=18$; $18+5=23$.

Thus 17 is not a member of this series hence $\frac{14}{239}$ can't be a member of the given series.

27. (b) This is a geometric series with common ratio 3 as shown below.

$$\frac{1,701}{567} = 3; \frac{567}{189} = 3 \text{ but } \frac{189}{42} \neq 3 \text{ and } \frac{42}{21} \neq 3.$$

However if 42 is replaced by 63 then $\frac{189}{63} = 3$ and $\frac{63}{21} = 3$.

Thus 42 is a wrong choice and hence should be replaced by 63.

28. (e) This is an arithmetic series with a common difference 33, $35+33=68$; $68+33=101$; $101+33=134$; $134+33=167$.

Thus 170 is not a member of this series and should be replaced by 167.

29. (c) This is again an arithmetic series with common difference 73.

$$305-73=232; 232-73=159; 159-73=86; 86-73=13.$$

Thus 162 is not a member of this series and should be replaced by 159.

30. (a) This is a geometric series with common ratio 3

$$15 \times 3 = 45; 45 \times 3 = 135; 135 \times 3 = 405; 405 \times 3 = 1215$$

Thus 915 is not a member of this series and should be replaced by 1,215.

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BETTER ENGLISH TEACHING COMPOSITION-2

BY RAGHU BHATNAGAR & RAJUL BHARGAVA

In this concluding part, important ways of paragraph development. Main types of paragraphs. And the inner structuring of different types of paragraphs.

Time

When he stayed on his grandfather's farm during his holidays, George always had plenty to do. Early in the morning, he used to feed the chickens and other farm animals. After he had finished that, he played with his cousins in the fields until lunch time. They would pick blackberries, chase rabbits, look for birds' nests, and play a hundred-and-one games. After dinner it was usually too hot to work or play, so George used to take a nap or read a book. Later in the afternoon he and his cousins would often go swimming. In the evening, the animals had to be fed again, the cows milked, and the chicken's eggs collected. Then it was time for George to go to bed.

(From *Paragraph Writing*
by Frank Chaplen)

Space

One theory is that cultivation of the grape originated in the area around the Caspian Sea. From there grape-growing spread to neighbouring areas of Asia Minor. The Phoenicians took the grape to Italy, and the Romans planted it in Germany and England. At the same time, grape cultivation spread into the Western Hemisphere, where it came into the land by way of India. Everywhere that new lands were settled, people took the grape along. Columbus and later colonists brought the European grape to America, where it had little success until it was crossed with the native American varieties.

(From *From Paragraph To Essay*
by Maurice Imhoof
and Herman Hudson)

Statistics

The Earth is an unimportant planet, moving round an unimportant star—the Sun at a distance of 93,000,000 miles, which is negligible on the astronomical scale. There are some 100,000 stars in our star-system or Galaxy, and the Sun is entirely unremarkable; it is perhaps 30,000 light-years from the centre of the Galaxy, near the inner edge of one of the

spiral arms. (A light-year, the distance travelled by light in one year, is equal to rather less than 6,000,000 miles. The nearest star to us, not counting the Sun, is 4.3 light-years away).

(From *The Listener*, Patrick Moore)

Comparison And Contrast

Thanks to this universality of athletic sports, English training is briefer and less severe. The American makes, and is forced to make, a long and tedious business of getting fit, whereas an Englishman has merely to exercise and sleep a trifle more than usual, and this only for a brief period. Our oarsmen work daily from January to July, about six months, or did so before Mr Lehmann brought English ideas among us; the English varsity crews row together nine or 10 weeks. Our football players slog daily for six or seven weeks; English teams seldom or never "practice" and play at most two matches a week. Our track athletes are in training at frequent intervals throughout the college year and are often at the training table for six weeks; in England six weeks is the maximum period of training, and the men as a rule are given only three days a week on the cinder track. To an American, training is an abnormal condition; to an Englishman it is the consummation of the normal.

(From *An American At Oxford*,
John Corbin)

Cause And Effect

What caused the Texas revolution?

The first cause was simply the difference in civilisation between the Mexicans who owned Texas and the Americans who came there. I don't mean the amount of civilisation; I mean in the *kind* of civilisation. The Mexicans had a Spanish and Catholic civilisation, and they believed in power and authority and tradition. The Americans believed in democracy and self-reliance. You might say that this difference was the thing underlying all the trouble that followed. But perhaps it would not have been enough of a thing to make the revolution if certain other things had not been the way they were.

The second cause was the fact that the Mexicans couldn't get rid of a fear of American adventurers coming in to seize Texas. There had been a lot of adventurers coming in to filibuster far back in the Spanish times, and the Mexicans didn't really trust the Americans that they themselves invited in and who took out citizenship and honestly tried to be good

and loyal Mexicans.

The third cause is related to the second. There were a good many adventurers in Texas, and you might go so far as to say that some of the leaders, like Sam Houston, were adventurers and were seeking to take Texas from Mexico.

(From *Modern Rhetoric*, Brooks and Warren)

Classification

Ideas about progress take three forms: (1) that there is no progress, (2) that progress occurs in cycles, and (3) that progress is permanent and irreversible. For reasons that we shall examine later on, the idea that progress is permanent and irreversible is of fairly recent growth.

The idea that there is no progress belongs to societies which have experienced little change. Eastern cultures, for instance, link a disbelief in progress with a fatalistic acceptance of life as it is. Only in recent years has this idea been challenged. Medieval European society, too, was marked by a disbelief in the possibility of progress. Men placed their hopes for betterment, not in this world, which was too often disappointing, but in the heavenly world to come.

(From *The Rationale Of Rhetoric*,
Alice Chandler)

Analogy

A composition can be compared to a three-act play. The introduction, like the beginning of the first act, presents the subject and its background. The development, like the end of the first act, all of the second, and much of the third, displays the complications or modifications, of the subject. And the conclusion, like the third act, resolves and sums up the action. While an essay has no plot in the technical sense, this straight-line movement from introduction to resolution gives the composition momentum and direction.

The same three-act structure can be seen in the paragraph. The topic sentence is the introduction, or first act, and the succeeding sentences are the all-important second act that develops the action. Although some shorter paragraphs do not have a formal resolution, or third act, most paragraphs, like this one, do conclude by rounding off the subject.

(From *The Rationale Of Rhetoric*,
Alice Chandler)

Having discussed the important ways of paragraph development it will be useful to consider the main types of paragraphs.

She wore a diamond necklace worthy of royalty. Her gait was regal too and the tone in which she spoke had a certain imperious character about it. Her looks, her bearing, her speech—all were majestic.

Narrative

It was a little before five in the morning when strange sounds started coming. Jitendra listened carefully and having assured himself that it was not a hallucination, got up to raise the alarm. The sounds grew fiercer and with that increased the pounding of his heart.

Argumentative

The theme of women's liberation is best left to be thrashed out by women themselves. For even with the best intentions male champions of feminist freedom are more likely than not to be misunderstood by those very persons who are supposed to be the beneficiaries of their crusade.

Reflective

Who can be said to be practising true non-violence? Is it an easy concept to define? The very enormity of its scope may be a deterrent to easy understanding. For, carried to its logical conclusion, would not non-violence be co-extensive with life? But does such a thought bring us any nearer to the proper definition of non-violence?

Evaluative

Even when the most rigorous standards are applied, Indian talent in scientific research is second to none. Given the same facilities and resources as their counterparts in England and America have, Indian scientists will excel in all those fields where at present the West boasts of an exclusive record of supreme achievement.

Finally, we will discuss the inner structuring of different types of paragraphs which results in establishing a variety of paragraph patterns:

Lineal Paragraph

Example: 1. Mere legislation cannot prevent dowry deaths. This may sound contrary to a widely held belief and also to the frequent and passionate demands made on the floor of Parliament by screaming members, who work themselves up in a hysterical state in response to newspaper reports of bride-burning in various parts of the country. 2. No social evil so ingrained in human nature because of man's greed for easy money and gifts has been wiped out by a mere legislative fiat. 3. History bears witness to the fact that it is only the rousing of the social conscience that brings about a real and enduring change of heart. 4. Hence, legislative reform at best achieves partial results and helps those who would like to bring the erring males to book. 5. It is, therefore, vital that a country-wide movement is launched by all the right-thinking Indians

to create a climate of opinion where the taking and giving of dowry will be deemed inherently immoral and therefore law will have to deal merely with a relatively small number of socially and morally perverse people.

Sentence 1 Assertion: Mere legislation cannot wipe out dowry deaths.

Sentences 2-3 Reason: A deeply ingrained instinct can be overcome mainly through social awareness.

Sentence 4 Result: Laws can therefore yield only partial results.

Sentence 5 Conclusion: It is necessary to create a general climate of opinion which regards dowry as abhorrent.

Circular Paragraph

Example: 1. English spelling is the world's most awesome mess. 2. The Chinese system of ideographs is quite logical, once you accept the premise that writing is to be divorced from sound and made to coincide with thought concepts. 3. The other languages of the West have, in varying degrees, coincidence between spoken sounds and written symbols. 4. But the spelling of English reminds one of the crazy quiet of ancient, narrow, winding streets in some of the world's major cities, through which modern automobile traffic must nevertheless in some way circulate.

Mario Per, quoted by *The Oxford Guide To Writing*, Thomas S. Kane

Sentence 1 Assertion: English spelling is the worst mess.
Sentence 2+3 Contrast: The Chinese system of ideographs is quite logical. The other languages of the West have, in varying degrees, coincidence between spoken sounds and written symbols.
Sentence 4 Analogical Restatement: English spelling is like the maze of medieval streets.

2. The Chinese system of ideographs is quite logical.
3. Spelling in other Western languages is very consistent.

Ramifying Paragraph

Example: 1. It is a typically male and one-sided opinion that throwing open public careers to women results in a lot of wastage. 2. For, it is alleged that women regard their professional jobs as a mere stop gap, or, at best a temporary supplemental source of income. 3. Once the compelling factors disappear, they resume their natural career—that of a housewife, secure in the lap of domestic bliss and connubial comfort. 4. It is conveniently forgotten that love of comfort and idleness is a common human weakness, in that given a suitable opportunity, anyone, man or woman, will take to it. 5. Only, men

enjoy themselves more through a perverse satisfaction of having to earn a living to support their families—which, in their estimation, excludes them and refers only to their wives and their children—and thus being the indisputable lords of the household. 6. It, therefore, needs no special intelligence to know that men have the best of both the worlds. 7. They have their domestic bliss and they have the satisfaction of having their families obliged to them for providing them with material support. 8. They don't have to exercise a choice. 9. However, theoretically the choice has always been there, for there are men like Antony who choose to have women at the cost of everything else, and similarly there are women like Florence Nightingale who choose work to the exclusion of everything else. 10. Choice, then, is an essentially personal matter and is neutral between the sexes.

Sentence 1 Assertion: It is male prejudice that working women are a cause of great wastage.

Sentences 2 + 3 Restatement: Sentence 4. Contrary Evidence
2. For women, their jobs are a mere stop gap.
3. Given a choice they will prefer a purely domestic life.

Love of comfort and idleness is a human trait shared by men and women alike.

Sentence 8 Contrary Appearance

It looks as though men do not have a choice.

Sentence 5 Reinforcement

Men work not out of love but to lord it over their wives.

Sentence 9 Contrast

In fact the choice is very much there.

Sentence 6+7 Inference

Anyone can see the truth that men manage to have the best of both the worlds.

Sentence 10 Conclusion: Choice is essentially a personal matter not related to sex.

Loose Paragraph

It is very much like the Ramifying Paragraph except that it develops out of a subject alone with the help of a string of several predications.

Summing up

Any organised, self-contained piece of writing composed or written for a special purpose can be called a Composition. In the writing of good composition go several skills, particularly grammatical accuracy, adequate vocabulary, appropriate tone or style, and careful structuring of ideas. Although we have discussed only paragraph writing here, it is not difficult to say that longer compositions called essays are merely extensions of the same techniques as discussed above.

(Concluded)

LALIT MAKEN A POLITICIAN'S PROGRESS



Young people are fast making their presence felt. In various fields—from sports to literature, films to politics. With trendsetting career paths. Lalit Maken is one of them. Recently elected MP, at 34, Maken is by no means a novice in the world of politics. Speaking to Y.C. HALAN and JYOTSNA SHARMA, he reveals various facets of his personality. His thoughts and views.

He is young, educated and dynamic and exudes an aura of confidence and enthusiasm. At 34, he already occupies one of the coveted seats in the Lok Sabha which has eluded many a seasoned politician. But Lalit Maken is no babe in the political woods either. At a relatively young age he has to his credit a political graph which depicts phenomenal rise—from student leader to trade union leader to MP—carving a niche for himself in the quicksands of Indian politics.

As befitting a product of the younger generation, Maken's views on various issues have shades of idealism though they are essentially practical. According to him, India of the 21st century will be sans the burning problems which confront the country today. Anti-national forces, he feels, are responsible for the prevalent chaotic conditions.

The politician

A Law graduate of the Delhi University, Maken abandoned the idea of taking up Law as a career and chose politics instead. Explaining this he says, "I belong to a family which has been actively involved

with politics. My father was a freedom fighter. My late elder brother was a member of the Metropolitan Council."

In his college days, young Maken was president of his college and later became a trade union leader before taking to full-time politics. And in the December 1984 Lok Sabha elections he was elected MP from Delhi.

Life of an MP can be very demanding. For Maken, however, being a political leader does not hamper his crusade against oppression of the working class. "Being a part of the ruling party does not mean I can't raise my voice for the working class," he states.

He crams into a single working day several meetings with the people to hear their problems, office work, Parliament sittings, trade union meetings and public functions, if any. And, in order to maintain close contact with the people, he has opened offices in several parts of his constituency which he visits in turn, thrice a week. He also meets people at his residence. In a vastly heterogeneous constituency, comprising both residents of plush colonies as well as jhuggi dwellers, the problems of the people are multifarious, too. However, equal importance is given to them by Maken who makes it a point to render assistance personally too, wherever possible. When a park in South Delhi was selected as the site for a shopping complex, he successfully voiced the concern of the residents to save the park. In another instance, when a jhuggi colony of his constituency was destroyed in a fire, Maken personally supervised the rehabilitation of the affected people. And it is this personal touch which makes Maken so different from his predecessors. However, Maken feels that the elected leaders of the masses should be provided with professional assistance in order to execute their duties efficiently.

On unemployment

Maken strongly feels that the government must give top priority to the unemployment problem which, according to him, is the root cause of all problems. Unemployment is among the major hurdles in the path of progress, says Maken, and it afflicts big townships and metropolitan cities more than villages. And this, he explains, is due to the lure of numerous lucrative jobs that villagers associate with cities. Their influx to cities, in large numbers, is aggravating the unemployment issue. Says Maken, "This race of villagers to the cities must be checked. This can only be achieved by creating

employment potential in the villages, too. The government should concentrate on providing incentives by setting up small-scale industries in rural areas. Big industrialists must also try and help by setting up their business in these remote areas."

On students and politics

With regard to politics entering university campuses, Maken, a student leader himself during his student years, strongly believes that political parties are increasingly using students as puppets in their vicious games and are responsible for encouraging agitations, through students. He, therefore, thinks that while it is essential for youngsters to be 'politically aware', they should not fall into the clutches of political parties and become party to their devious designs.

On trade unions

A popular trade union leader himself, Maken is totally committed to the workers' welfare. Generally known as the 'Datta Samanta of North India', he does not quite approve of the simile. For, in Maken's opinion, while the notorious Bombay trade union leader tries to make any conflict with the authorities a personal issue, Maken believes in solving problems peacefully and as quickly as possible, without resorting to violence, so as to safeguard the rights and welfare of workers. He, however, unequivocally condemns the multiplicity of trade unions which is, to a large extent, responsible for labour unrest and also for the destructive competition existing today. He suggests granting of recognition to major trade unions as a remedy for eliminating this problem.

With regard to the current trend in Indian economy, wherein the economy is improving at a slow pace while inflation is fast increasing, the cause being generally attributed to the salary component which is rising faster than production (especially in the manufacturing sector), Maken denies that increase in workers' wages is the cause. The crux of the problem is the parallel (black money) economy which should be flushed out to curb the rising inflation. Also, production should be increased and incentives given to workers through productivity agreements in which workers should be given added bonus on above-average production. Talking about the role of workers and trade unions he says, "Workers should work sincerely. Trade unions should help maintain discipline and not let personal interests creep into their work."

Being a politician does not mean he neglects his family. In fact, he enjoys spending any free time he has with his young daughter or in catching up with his reading. But despite the responsibilities of home and politics he retains an energetic personality, and no reservations of an ideal India.

NEWS CAPSULE

AWARDED

The **UN Population Award** for 1985, carrying a gold medal and a cash prize, to the London-based International Planned Parenthood Federation, the largest non-governmental body with associations in 120 countries.

The **Mahar Award** (1983) for sciences to M.G.K. Menon, member of the Planning Commission. The award, instituted by the MP Government, carries a cash prize of Rs 1 lakh and a citation.

The **US Presidential Medal of Freedom**, America's highest civilian award, to Mother Teresa in recognition of her work among the poorest of the poor in the world.

APPOINTED

Anjan Singh, Punjab Governor, as Administrator of the Union territory of Chandigarh. The new post will be in addition to his responsibilities as governor.

K.T. Satarawala, former Punjab Governor and retired civil servant, as India's new Ambassador to Mexico, replacing N.P. Jain. Satarawala had also served as the Lt Governor of Goa, Daman and Diu from February 1983 to June 1984.

John Gooder Dean, the US Ambassador to Bangkok, as the American envoy in New Delhi, following the end of the term of Harry G. Barnes. Barnes left his post on Jun 27.

Gen R.S. Sparrow, a former Lok Sabha member, as President of the Punjab Pradesh Congress Committee, replacing Santokh Singh Randhawa, who resigned after allegations that he had links with terrorists.

SCIENCE

Vampirism—a disease? Folk tales of night-roving vampires and werewolves can be explained by the symptoms of a rare genetic disorder which blocks the production of a vital blood component, according to David Dolphin, an American-based British researcher. The genetically-passed disease called *Porphyria* results from lack of the substance called heme, which is produced in the liver and makes blood red and helps carry oxygen in haemoglobin. The lack of heme could also explain the legend of Dracula and other blood-sucking humans, according to Dolphin. Victims of the disease can be disfigured terribly by sunlight, develop excessive body hair and go intermittently mad. There is no cure, but symptoms can be alleviated by treatment like injection of heme, which turns off a malfunctioning mechanism that makes the disease-carrying substance.

Fuel for life: Parts of comets, meteorites and other planets may have struck the earth millions of years ago, causing the formation of natural gas as well as decomposition of plants and animals, says Dr Thomas Gold of the Cornell University in the US. If the theory is correct, Gold predicts substantial new discoveries will

dramatically increase world fuel supplies and even the geographical distribution of natural gas. Gold believes that hydrocarbons which include methane or natural gas, were formed deep inside the earth as a result of such events. When 19th century scientists first postulated that hydrocarbons were produced organically, they did not know that hydrocarbons could possibly be the result of cosmic events.

Second Indian space odyssey in the offing: Two space scientists of the Indian Space Research Organisation (ISRO) have been named for final selection of the Indian cosmonaut who will be on board the US space shuttle next year. They are N.C. Bhat, an engineer at the satellite centre of ISRO, and A. Radhakrishnan of the Vikram Sarabhai space centre, Trivandrum. The two have left for NASA in the US for further training. The final choice between them will be made known in July.

Space action plan: The Space Commission has drawn up an action plan for 1985-95, giving a major thrust to India's rocket-launching technology. The perspective plan includes indigenous launching of advanced remote sensing and other satellites and the Geostationary Launch Vehicle (GSLV) which is to be the successor to the Polar Satellite Launch Vehicle (PSLV). The plan envisages the launching of a series of satellites designated "stretched Rohini satellite series".

CAREER NEWS

Fellowship in Electronics

Young scientists and Electronics engineers with an aptitude for research and development are in for a challenging opportunity. The Department of Defence Research and Development, Defence Research and Development Organisation (DRDO), Ministry of Defence, will conduct a one-year fellowship programme to provide exhaustive training in Electronics at the Institute of Armament Technology, Pune. On successful completion of the training, candidates would be placed in one of the laboratories/establishments as Scientist 'B' in the scale of Rs 700-1300.

If you are 28 and possess a first class master's degree in Physics or Applied Physics with specialisation in Electronics or a bachelor's degree in Engineering/Electronics and Communication Engineering, or equivalent, from a recognised university, you may be one of the 50 candidates (SC-8 and ST-9) likely to be selected for the programme. Selection will be on the basis of a test/interview.

For details and proforma of application, you may look up *The Times Of India*, Jul 13, 1985. Applications should reach the Director, Recruitment and Assessment Centre, Room No 225, B Wing, Sans Bhawan, New Delhi-110 011, preferably by registered post, in a cover superimposed "Application for Fellowship in Electronics," latest by Aug 5, 1985.

EDUCATION

Indo-US cooperation: The Indo-US sub-commission on education and culture ended a two-day session in Washington on Jun 21 by agreeing on a series of new programmes designed to give a fillip to cooperation between the two countries. One of the programmes will be to establish artists-in-residence to enable artists to spend upto eight weeks at schools or universities. Another deals with exchange of visits by distinguished Indian and American journalists. A significant development is the proposed release of a text book on India, 20,000 copies of which are to be distributed in American schools.

Film, worthy of postgraduate study: Jadavpur University in Calcutta will introduce a full three-year postgraduate degree course on film studies next year. An expert committee headed by the vice-chancellor has already been formed to go into the details like syllabus and curriculum.

DEFENCE

New killer weapons for US arsenal: The US military is expected to get a variety of new tactical weapons under a \$4.6b weapons programme. The weapons include 155-mm nuclear-tipped artillery shells, nuclear-tipped anti-submarine torpedoes, nuclear-tipped ship-to-air anti-aircraft missiles, small nuclear demolition mines and nuclear-tipped aircraft-to-surface missiles. The US Navy is hardening its ships and aircraft against the effect of nuclear weapons, signifying the new navy view that a nuclear war can be contained at sea—a reversal of past policy.

The Mirage has arrived: The French-made Mirage-2000 aircraft, India's answer to Pakistan's F-16s, was inducted into the IAF on Jun 29, with the Defence Minister, P. V. Narasimha Rao, formally receiving the first batch of seven aircraft. The aircraft will be called "Vajra" after the sword of the mythological god Indra. The multi-role, low-level, high-speed penetration aircraft were acquired under a contract signed in 1983. The remaining aircraft will be flown to India by next year. India is the second country after France to possess the aircraft which is capable of destroying any known type of hostile aircraft flying even at three times the speed of sound.

ECONOMY—National

WFP aid for UP project: The UN World Food Programme (WFP) will give commodity aid worth Rs 29 crores for the watershed development project in 22 districts of UP. An agreement to this effect was signed on Jun 7 in New Delhi. The total cost of the scheme is estimated at Rs 156 crores of which Rs 117 crores will be contributed by the UP Government. The main aim of the project is to accelerate ongoing developmental activities in the field of watershed management and afforestation, raise income, food intake and productivity of forest workers.

India's trade deficit in the year 1984-85

stood at Rs 5,187.5 crores—Rs 763.6 crores less than the deficit at the end of the previous year. The fall in the deficit is due to a higher rate of growth of exports, which went up by 20.2% to Rs 11,297.4 crores from Rs 9,396.2 crores in 1983-84. Imports registered a 7.4% increase to Rs 16,489.4 crores from Rs 15,347.3 crores in the previous year. Provisional export figures for March 1985 at Rs 951.4 crores show an increase of 69% over the export performance of March 1984.

Excise and customs to yield more? A national Plan has been drawn up to mobilise an additional Rs 2,700 crores from Central excise and customs by plugging leaks and expediting excise cases pending in courts. The three-tier Plan finalised at a conference of excise and customs collectors in Bombay envisages that Rs 1,000 crores of the Rs 1,300 crores locked up in court cases will be collected this year. Plugging customs leaks will yield Rs 500 crores and checking undervaluation of commodities Rs 1,200 crores. The Plan will be implemented from July and its results reviewed in September.

India gets pat on the back from IMF: An IMF study has praised the new economic initiatives in India as a "major step forward" in the government's efforts to mitigate the disincentive effects of burdensome production and productivity regulations. The new measures, while leaving the regulatory mechanism intact, are expected to remedy deficiencies of the previous policies, it said. The study noted that despite two oil shocks and major domestic dislocations stemming from drought and other upheavals, "India was able to contain the balance of payments effects of the external and internal shocks and even to achieve some small acceleration in real economic growth."

ECONOMY—International

Optimistic inflation scene in Asia: Asian

countries, with the exception of the Philippines, have managed to slow down inflation in the last year, according to an IMF report. India showed an increase of only 4.3% in February compared with 1984's rate of 8.3%. Indonesia recorded a 3.7% growth in March. The IMF report said price increases reached a new low in the US—3.2% in 1983, gained speed in 1984 to 4.3% but have slowed down since. As a whole, in 21 countries, including the US, the first quarter of this year was the fifth in a row to record an inflation slowdown. The annual rate for January-March this year was 4.3% compared with 5.2% in 1984's first quarter. Iceland's rate was the highest at 28.9% and Japan's the lowest at 1.6%. But prices were still galloping in Latin America, topped by Bolivia with a record inflation rate of 3,407.6% in Jan. Argentina's was 850.8%, Brazil's 220%. Most west European countries seemed to have inflation under control—West Germany with a 2.5% annual rate, France 6.5% and Britain 6.1%.

North-South parleys: Ministers from 21 leading industrial and developing countries ended a two-day meeting in Stockholm on Jun 10 by coming closer to an agreement on new multilateral trade negotiations to deal with growing protectionism. Although their agreement was largely on procedural issues, ministers from both sides said there had been substantial progress in reconciling the views of the West, which wants new talks, and the Third World, which is wary of them.

UNCTAD drubs transnationals: The UN Conference on Trade and Development (UNCTAD) has criticised the transnational corporations for concentrating on providing non-financial resources like management technology and marketing to developing countries, which needed more direct investment. In its latest report on the role of foreign direct investment in development finance, submitted to the committee on invisible financing related

to trade, UNCTAD charged transnationals with having effectively shifted the investment risk to international lenders and host nations. The report highlighted the rapid growth of new forms of global investment which include arrangements such as joint ventures, licensing deals, franchising, management contracts and turnkey deals. The implications of such deals is that risks related to capital investment are shifted to the host country. The report said that in the aggregate flow of resources to developing countries, the share of foreign direct investment (FDI) fell from 18% in 1970-72 to 12% in 1981-83 and predicted it would increase by only 25% or less in real terms in the next five years.

STATES

Bihar's tortuous politics: The Election Commission (EC) says elections in Bihar will not reflect the will of the electorate unless effective measures are taken to curb violence, intimidation of voters and other electoral malpractices in the eastern state. "This state is extremely cast-ridden and anti-social elements have been meddling for a long time with the elections by using their muscle power," the commission said, in a chapter on poll violence in its latest report to the Parliament. It condemned the ineffective law and order machinery in Bihar which failed to implement EC-recommended measures to combat electoral malpractices. During the December Lok Sabha elections, 53 constituencies were affected by violence, Bihar topping the list (27 constituencies) followed by UP (10), J & K (30) and Andhra Pradesh (6).

Orissa Sands Complex: The public sector Indian Rareearths Limited, an establishment of the Department of Atomic Energy, is initiating a Rs 110-crore project to mine radioactive sands in Orissa's foreshore territory. The project, to be called the Orissa Sands Complex, will be commissioned during 1985-86. The radioactive sands in Orissa's foreshore have 21% concentration of rare earths. The minerals are used in nuclear reactors, manufacture of paints, electrodes and refractors which fetch a tidy price in the market.

Nagaland's white paper: The Nagaland Government on Jun 28 released a white paper entitled "The Untold Story Of Merapani", giving its version of the events that led to the border clash between Assam and Nagaland police in the first week of June. It had three annexures on the historical background of the Assam-Nagaland border dispute, instances of provocative acts by the Assam Police, and a background on the blockade of the Nagaland checkgate by the Assam Police at Merapani. The paper charged the Assam Government with indulging in "wanton provocative acts" in the border area to "tighten the noose round our neck slowly but surely". It charged Assam with disregarding all pleas to restrain its police from the blockade.

EVENTS—National

The latest move on the Sino-Indian chessboard: China has invited India to open a consulate in Lhasa, the forbidden capital of Tibet, and Shanghai—a proposal seen by observers as calculated to making a dramatic impact on the current negotiations to improve relations. The proposal was officially conveyed

DID YOU KNOW THAT...

■ there are 2,000 species of snakes in the world out of which 200 are in India?

■ six of the world's top selling perfumes are French? These are: Chanel No. 5; L'air du Temps; Opium; Arpege; Shalimar and Coco. The country accounts for 70% of the world's fragrance trade, 800 years old in France.

■ Byelorussia, one of the 15 Soviet republics, located in the western part of the USSR, means 'white Russia', as the people in this region are whiter than the rest of the Russians and the republic is all white and covered with snow from September to April?

■ the largest acquisition in broadcasting history was the \$3.5b takeover of ABC by Capital Cities Communications in March 1985?

■ the Chipko movement was launched in the Himalayas in 1973, when thousands of men, women and children clung to the trees to prevent them from being slaughtered by corrupt contractors in the name of progress?

■ India is the world's largest producer of tea—560m kg —of which 240m kg is exported to 80 countries? India consumes over 10m plywood tea-chests annually for which an estimated 80,000 tonnes of timber is consumed

■ despite the threat of boycotts and sanctions, dating back to the early fifties, South Africa has only become economically stronger? The 1963 arms embargo and the oil boycotts of the 1970s notwithstanding, South Africa has become the world's tenth biggest arms exporter and a leader in synthetic fuel production.

■ the cost of production of sugar, according to the Bureau of Industrial Costs and Prices, is Rs 4.18 per kilo at a cane price of Rs 22 per quintal? The international price in London is \$130 a ton or Rs 160 per kilo

■ a parliamentary secretary is an appointee of the PM and not a member of the Council of Ministers? He functions only in the House to which he belongs and assists the minister he is attached to (He is sworn in by the PM.).

■ South Korea, Taiwan, Hong Kong and Singapore are known as four 'Little Tigers' for becoming economic powers despite their small sizes?

■ Utah, a state in the US, is known as 'the world's "diaper capital", since the baby boom there is still booming? The birth rate, 29.6 per 1,000 residents, is double the US rate and close to India's.

in 1982 in the wake of the border conflict last year. The proposal by Beijing is being carefully weighed by New Delhi which cannot respond to it in isolation of its overall China policy.

Restructuring of NTPC: The National Thermal Power Corporation (NTPC) is being restructured as part of a 15-year growth plan, to avoid an unwieldy monolithic organisation in the interest of greater efficiency. In the first phase of the reorganisation, the engineering and services, decentralised in August 1982, have been again centralised at the NTPC's corporate office.

India to participate in world youth festival: India is to be represented by a 500-member youth delegation at the 12th world festival of youth and students in Moscow from Jul 27 to Aug 3. About 30% of the delegates will be women. This is the third such festival, the first having been held in Prague in 1967 and the second in Havana in 1978.

An Indian language news agency? A six-member committee comprising prominent journalists and owners of language papers is to examine the possibility of setting up an Indian language news agency. The committee, with Ram Nath Goenka of the *Indian Express* group as convener, will also examine the possibility of entrusting PTI and UNI with the work of providing a news agency service in Hindi and other Indian languages. These decisions were taken at a two-day meeting in New Delhi which ended on Jun 26, with the Union Information Minister V.N. Gadgil, and several newspaper representatives attending.

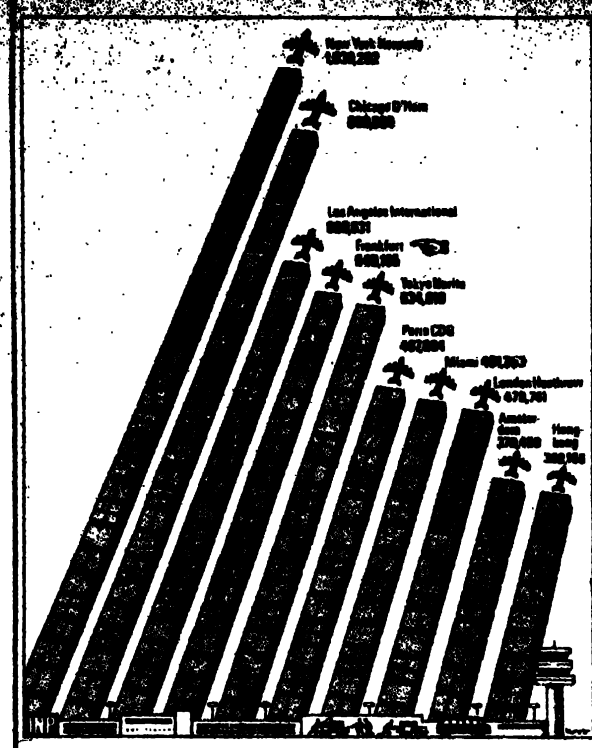
EVENTS—International

Peru's new President: Alan Garcia, the charismatic 35-year-old leader of a populist party, often at odds with Peru's military, has become the South American nation's new President. Garcia won the presidential election with 45.7% of the votes polled, with Alfonso Barrantes, the Marxist Mayor of Lima, second with 21%. Garcia takes over as President at a time when Peru faces its worst-ever economic crisis and a guerilla insurgency that has taken 5,000 lives.

Routine extension: The governments of the seven countries of the Warsaw Pact have ratified an agreement extending the alliance for another 20 years. The agreement to extend the 30-year-old alliance was reached in Warsaw on Apr 26 by the governments of the Soviet Union, Poland, East Germany, Czechoslovakia, Hungary, Romania and Bulgaria.

Reconciliation South Africa: Defying world opinion South Africa on Jun 17 installed an interim government in Namibia through a proclamation signed by President Pieter Botha. The latest move by Pretoria delays the UN's prescribed independence plan for Namibia and was immediately condemned by the world body and governments the world over. The new administration in Namibia, which will leave control of foreign affairs and defence in Pretoria's hands, will comprise a council of ministers made up of six local parties and a 62-member legislature.

Italy's youngest President: Christian Democrat Francesco Cossiga, a two-time for-



FREIGHTING HIGH

The world is becoming increasingly inter-dependent. One stunning evidence of this is the relentlessly expanding volume of freight handled by international airports. The US being the world's economic goliath, it is hardly surprising that New York's Kennedy Airport is the busiest in the world. And in Europe, it is Frankfurt that enjoys this distinction. Incidentally, London's Heathrow may not be holding a candle to Kennedy, but it still remains the only airport in Europe to have the largest volume of 'human cargo' passing through it.

mer PM, was, on Jun 24, elected Italy's new President, succeeding socialist Sandro Pertini. Cossiga, 56, is the youngest-ever President of Italy. He will be in office for the next seven years.

UN Charter 40 years old: Jun 26 marked the 40th anniversary of the signing of the UN Charter, which led to the creation of the world body. Secretary-General Javier Perez De Cuellar, at a ceremony to mark the day, called the document a "monumental achievement in the search for a peaceful world." Nine countries used the occasion to come out jointly with a call for bolstering the UN forces and institutions, particularly the Security Council and the peacekeeping forces. They recommended a special meeting of the Security Council aimed at reinforcing the organisation's effectiveness. The nine countries were Sweden, Argentina, Austria, Canada, Jordan, Malaysia, Senegal, Spain and Tanzania.

ILO's annual conference: A three-week-long annual conference of the International Labour Organisation (ILO) ended in Geneva on Jun 27 after adopting a series of conventions, recommendations and resolutions to prevent industrial accidents. A convention on occupational health services makes it obligatory on ratifying members to develop such services and undertake measures to prevent accidents. The theme of the conference was industrial relations and ILO Director-General, Francis Blanchard highlighted the essential role of tripartism for developing harmonious employer-employee relations. The 250 workers, employers and government delegates who spoke during the debate fully endorsed Blanchard's view.

MISCELLANY

A historic find: Turkish, West German and

US archaeologists have discovered what they believe to be the oldest village in the world in southeast Turkey. According to Turkish historian Halet Cembel, who led the excavations, the 9,000-year-old village was discovered after 21 years of work. This was the first time that such an old village had been found with the remnants of stone buildings showing that a varied and complex community lived there. The villagers farmed and raised cattle and knew how to make use of bronze 2,000 years before the date usually accepted as the start of the bronze age. The groups' finding should lead to a revision of the dates laid down by historians for the time tested first-recorded human settlements.

Black human rights scene: More than 1,500 people were executed in 40 countries last year, according to Amnesty International, the London-based human rights organisation. Amnesty said the actual figure was likely to be much higher than its 1,513 because many governments provided incomplete figures. In Iran, 661 people were executed in 1984, but many more executions are believed to have taken place. China reported 292 confirmed executions but these did not include the ones in rural areas. Amnesty said it had learned of 2,068 death sentences in 55 countries last year. The organisation described the death penalty as cruel, inhuman and degrading and called for its abolition all over the world. By 1984, 27 governments had abolished the death sentence for all offences and 19 had retained it only for "extraordinary" offences such as wartime crimes.

Child labour still rampant: An estimated 150m children continue to be used like "animals", in mining, manufacturing and other dangerous occupations throughout the world, according to the World Health Organisation (WHO). One in every four children in India,

Thailand and Turkey and 100,000 in Mali and Tanzania are workers, according to B. Batawi, chief of WHO's office of occupational health in Geneva. Child labourers suffered under conditions similar to those in 18th century Europe. The offences occurred largely in Third World and developing countries. "Colombia is the worst but it is also bad in Brazil, Ecuador and all of Africa," Batawi told delegates to the international conference on the health of miners in Pittsburgh, USA. The WHO official said industrialised countries sometimes sold developing nations obsolete and hazardous equipment that would not comply with their own safety standards.

POPULATION

(Continued from page 18)

they are not planing their families, under instructions from their religious priests. The opponents of family planning also spread a fear among the ignorant masses that after sterilisation if children of a family die, the family will be doomed for ever to live without children.

Thus, it is evident that ignorance of the people is exploited by some opposition parties to scuttle the actual implementation of government-sponsored family planning programmes in India.

Economic Planning

The population policy of the Government of India is an integral part of the total process of economic planning which includes development of health services, educational facilities and generation of employment opportunities. Controlling the population growth is not the only aim. People who are born should be socially developed and it is the socially developed groups who automatically practise the small family norm. Population policy of the country has to be comprehensive in its social objectives and for this, political consensus should exist in the country. The worst part of the story is that, in the rural areas and in the slums, rumours against family planning have taken a communal tinge and an element of fear has been injected amongst the ignorant masses.

The government functionaries who are in charge of implementation of family planning programmes ought to be sensitive to the prejudices and superstitions of the masses. A prerequisite of a successful family planning programme in a developing country is education of the people and the government alone cannot perform this job. Voluntary effort and political mobilisation is an essential prerequisite.

To sum up, the government has attached great importance to the population policy in India but it needs to be backed by political consensus and mobilisation by political cadres. Social prejudices have to be overcome with the help of political parties, through their voluntary effort. Government functionaries alone cannot achieve the targets.

DIED

Lord George Brown, 70, a former British Foreign Secretary and one of the most colourful and unpredictable politicians of the 60s, after a long illness on Jun 2 in London. Brown was the deputy leader of the Labour Party from 1960 to 1970 and Foreign Secretary from 1965 to 1968.

Karen Ann Quinlan, 31, who lapsed into a coma a decade ago and prompted a historic right-to-die US court decision, on Jun 11, at a nursing home in Morris Township. Quinlan lapsed into coma on Apr 15, 1975 and after

three years, the court ordered the hospital to disconnect her from a respirator. The court granted the permission but contrary to doctors' predictions, she remained alive.

Prof Y. Nayudamma, 63, former Director-General of the Council for Scientific and Industrial Research and former Vice-Chancellor of the Jawaharlal Nehru University, on Jun 23 in the air crash of an Air India plane in the Atlantic. Nayudamma was awarded the Padma Shri in 1971.

Elias Sorkis, 61, former Lebanese President who took over soon after Lebanon's civil war broke out in 1976, on Jun 27 in Paris. A.P.

A RAT RACE FOR PEACE

BY GAUTAM KAUL, Additional Commissioner of Police, Delhi

Man is a social animal. He cannot exist alone. At the same time his existence is disturbed in the presence of too large a crowd. In fact social scientists have analysed that there will be a point in human population concentration when man would act irrationally if he is put in a place which is over-crowded. It follows that when a given community gets over-populated there would be a complete breakdown in the law and order situation which would ultimately result in the disintegration of that community.

This inference was reached on the basis of experiments conducted on the behaviour of rats.

Rat Experiment

In 1964, American scientists in the University of Wisconsin were conducting research on the behaviour of rats using white mice as their model. They had ordered a large consignment of white mice without arranging enough storage space in the university animal farm. Since all the mice looked healthy, they decided to put the newly arrived stock into cages in which there were already a large number of white mice. The transfer of fresh stock led to over-crowding of the mice.

After 24 hours the rat cage was inspected and it was found that a very large number of white mice had died. The cause of death was shock and haemorrhage—result of the white mice having bitten each other. When the dead white mice were removed it was found that the concentration of the living white mice was enough to allow each mouse to move away to a distance equal to the space occupied by its body.

One of the scientists then decided to replenish the cage with a smaller number of white mice. When they were added it was found that all the new entrants to the cage were again killed by the existing mice colony. It dawned on the scientist that there must be a correlation between the number of mice that can be kept in the cage and the area of the cage.

The scientists discovered that the behaviour of rats was directly related to

the concentration of rat population and that increase in the population of rats beyond a certain number led to the rats killing each other till the concentration was brought down to acceptable levels.

The experiment also revealed that there was a related irritability factor in the behaviour of white mice and this factor increased as population in the cage increased resulting in irrational behaviour.

The experiment also showed that breeding in captivity also stopped after a certain point which was much lower than the point at which rats were killing one another. It was inferred that the factor of irritability increased sharply when they were not in a position to undertake the breeding process but the level of intolerance was not achieved till the population increased drastically. As soon as the rat population was brought down breeding started again.

Human Behaviour

This inference was applied to human behaviour. Field observations were undertaken in slum colonies of Hong Kong, Harlem in New York City and some other controlled areas to find out if there were similarities between the behaviour of humans and that of white mice. It was found that in all respects, factors noticed in the behaviour of the former were similar to those noticed among the latter.

It was also revealed that for human beings the minimum required space is 5 sq ft. This is known as the area of 'private defence'. As soon as this minimum area is encroached, human behaviour by a natural process would acquire a threatening posture, rioting and murder would follow.

This model of social behaviour has its lessons to all law enforcement agencies as well as those who have the duty to plan new towns and colonies. To prevent anarchy in human society we need to decongest many of our metropolitan areas and discourage the growth of slums for they are the area which is most threatened by violence and disorder. And the major cause of increasing violence in countries like India is over-population.

Should India Go In For Hi-tech Now?

To many Indians hi-tech is the password to whose chime the doors to an Eldorado will swing open. India's salvation, they are convinced, lies only in hastily boarding the hi-tech bus. To prove the point they cite examples of countries like South Korea, Singapore, Taiwan and Hong Kong—the "four little dragons of Asia"—which have struggled out of the rut of poverty and soared to prosperity on the buoyant wings of hi-tech.

To others such an unseemly hurry in jumping onto the hi-tech bandwagon smacks of a meek attempt to imitate patterns of development set by countries with vastly different socio-economic and cultural backgrounds. Hi-tech, they feel, is neither relevant nor appropriate to India and serves only to scuttle indigenous efforts to develop appropriate technology.

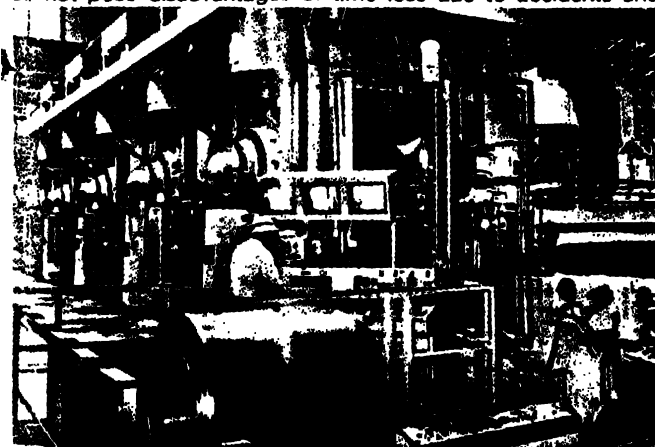
In the nascent months of Rajiv Gandhi's premiership Indians have, in general, become more aware of hi-tech than ever before. Hi-tech has become a topic of engaging debate not only among the mandarins of India's bureaucracy but also among the common people.

More than anything else this signals a break with the past practice of conventional thinking and a growing desire in Indians to think anew. But, has India reached the stage of economic development from where it can safely take off in the direction of higher technology? Or is it too early to do so? Here we present views for and against the subject.

For

■ India, like other developing countries, must use sophisticated technology to improve the quality of its products and reduce costs of production. This will lend its products a sharp competitive edge in the international market and give the much needed fillip to its exports. The increased flow of money from growing exports can then be used to fund welfare programmes and large industrial projects in key sectors of development; for both these crucial development activities, India is presently depending on foreign assistance.

■ Though seemingly expensive, hi-tech is an infinitely more cost effective method of production than labour intensive traditional methods. Wonderful gifts of hi-tech like the robots dramatically improve productivity and quality control. They are sleepless mechanical workaholics, are free of absenteeism and do not pose disadvantages of time loss due to accidents and



strikes. No wonder the world's most productive and profitable businesses are run largely by robots. And as the Long Term Credit Bank of Japan notes: "While wages over the last decade have been rising 13% a year the cost of a typical robot has remained unchanged at about 6.3m yen (Rs 2.5 lakhs)".

■ Nor does hi-tech, as is commonly believed, lead to unemployment. It will, no doubt, herald major changes in the work scene; there will be new ways of working, different kinds of jobs but not fewer jobs. As newer applications for computers are found, a whole new world of job categories will open up. By converting what is essentially an agrarian economy into an industrial one and then a service economy, hi-tech will generate a number of jobs for each one it takes away.

Against

■ It is doubtful whether by stepping up exports we will be able to combat our basic problems of poverty and backwardness. South Korea, which has fully exploited the hi-tech revolution to propel itself to the forefront of the newly industrialised countries, has for instance, failed to fulfil this social objective. Says *Newsweek*: "For all the progress deep pockets of poverty exist throughout the country." Yet its exports have surged from \$119m in 1964 to \$2,000b last year.

■ Hi-tech is very expensive. In purely economic terms it would be impossible for a poor country like India to opt for a full scale acquisition of hi-tech. The international hi-tech market, due to concentration of know-how in industrialised nations, has developed monopolistic features. The pricing mechanism takes into account the enormous investments made on R & D in these countries. By buying prohibitively expensive hi-tech from advanced nations we are actually financing their R & D efforts which are primarily geared towards producing technologies appropriate and relevant to their needs and not to our socio-cultural ethos or economic needs.

■ Despite the most vigorous population control measures, India's population is expected to cross the 1,000m mark by the end of this century. In the foreseeable future, therefore, humans are going to be India's mainstay resource and humans rather than machines will have to be at the centre of any of India's plans to fight its crippling problems.

■ New information technology is no doubt full of promises but we will have to see whether we have the resources and the socio-cultural preparedness in the country for the induction of such futuristic techniques. Besides, the most pressing need in India today is not so much the discovery of new resources but the full utilisation of the potentials we already have. Have we, for instance, been able to fully exploit the already monitored and known natural resources for the benefit of the people? Thus the most compelling need of the hour is to work for the development of a socially just system where the fortunes of the people at large are directly related to those of the state, and a work atmosphere in which we are able to make optimum use of whatever we have achieved.

■ Since independence we have made considerable progress in science and technology; but has this made the lives of Indians any better? (150m people live below the poverty line.) Scientific advancement has meaning only when it is accompanied by cultural development. The people must be culturally alive and capable of seeking and absorbing the fruits of scientific

(Continued on page 58)

Federation. Could the Indian officials have avoided it? Why has our game been allowed to sink to such depths? An analysis of the 'unsporting' issue in the news this month. Also, while all eyes are set on the Cubbon Park court, Bangalore, venue of the forthcoming India-Sweden Davis Cup tie, a replay of the Cup.

INDIAN HOCKEY

CORNERED FOR A PENALTY?

BY NOVY KAPADIA

Six of India's star hockey players have been suspended unilaterally and for an unspecified duration by the International Hockey Federation (FIH) at its meeting in Brussels (Belgium) in April 1985. Also suspended were the manager K. S. Bedi, coach Har-dayal Singh and assistant manager Ashok Kumar. The players and officials were accused of an assault on the Japanese umpire Yashimo Yubuta during the closing moments of extra-time in the final of the Asia Cup at Dhaka in January this year.

At that juncture, arch-rivals Pakistan had forged ahead 3-2, following a controversial penalty-corner goal by right-winger Kalimullah. Only two minutes remained of the second half of extra-time when Kalimullah received a rebound off goalkeeper Romeo James' pads and sent a shoulder high shot into the net. The scorer tapped the ball from well above his shoulder and could have been pulled up for dangerous play. Umpire Yubuta's decision after the Pakistanis appealed for it provoked the Indian players who rushed towards him.

Meanwhile, over 1,000 spectators—nearly 4,000 were seated on the fringe of the sideline—rushed onto the field to congratulate the Pakistani players. In view of the prevailing chaos it becomes extremely difficult to discern and identify the so-called culprits of the Indian hockey team who allegedly hit Yubuta. Photographic evidence reveals that six Indian players gheraned the umpire cajoling him to reverse his decision. The players were inside-right Merwyn Fernandez, substitute forward L.

Tikken Singh, half-backs M. Somaiyya, Har-deep Singh and Rajinder Singh and goalkeeper James.

Though the photograph reveals Fernandez in a menacing posture, near the umpire with a raised stick, the soft-spoken Indian Airlines inside-right has repeatedly stated that he raised the stick to demonstrate the way Kalimullah scored the controversial goal, thus highlighting the injustice of the award. The technical delegate at the match Ueda (also of Japan) reached the conclusion that Yubuta was assaulted by the Indian players because of their menacing gesticulations.

There is no doubt that Yubuta was hurt. However, the fact to be determined is the cause of the injuries. Was it caused by the Indian players? There is a school of thought which firmly believes that the mob that surged onto the ground ran amuck, shoving and

colliding against each other, jostling umpire Yubuta who tumbled by the impact of a few unruly spectators and was subsequently trampled upon. Immediately after the crowd was cleared some Indian hockey players surrounded the Japanese umpire urging him to reconsider his decision. Being in a traumatic state, it is possible that Yubuta misidentified his actual assailants. Video-recordings of the match also reveal that Indian players and officials indulged in tantrums to try and disrupt the match.

Thus, there is a strong possibility that the technical delegate Ueda has in his report penalised India not only for the injuries to umpire Yubuta but also for the tantrums and disinclination to continue. Hence, the one-year suspension of the manager, coach and assistant manager and skipper Somaiyya.

The crux of the matter is that for years many FIH officials have strongly felt that Indian hockey teams do not take umpiring decisions against them sportingly, and tend to be overtly demonstrative. Indian hockey officialdom, to camouflage its own inefficiency, takes refuge in the propaganda that the umpiring fraternity persecutes India with wrong decisions in envy of our glorious past record.

Players and coaches of the Indian hockey team have recently been explaining away defeats by blaming perverse umpiring decisions. The actual causes of the decline of Indian hockey, like shortage of quality players, unfamiliarity with the exacting demands of playing on artificial turf and diminishing popularity of the game amongst the youth, are glossed over and the foreign umpires are made a scapegoat. This persecution complex has been unfortunately ingrained into the minds of our national players also. So they have no qualms in protesting against umpiring decisions, little realising that unnecessary pressure antagonises the supervising officials. At Dhaka, the display of protests and tantrums by the Indian players became a bit too much, and hence the extreme punishment. In fact, the Indian team and officials sulked for 30 minutes and only relented after a stern warning from the technical officials and fear of reprisals from a volatile crowd.

The concern of FIH officials to assert the supremacy of the umpires led to the drastic action against the Indian players. What is really galling is the insensitivity and incompetence of the officials of the Indian Hockey Federation (IHF). Marred by fiesiparous tendencies for many years, IHF officials did not even inquire into the incident. Thus they had no inkling of what was in store for them. As usual the IHF is indulging in the customary practice of passing the buck. Manager K.S. Bedi was blamed for not highlighting the incident and culprits in his report. The manager, of course, denies this allegation and states that he had presented an accurate picture but the IHF officials preoccupied with their elections, neglected the issue. So callous has the IHF been that they never

Below: Asia Cup: A bitter finale. Right: True or false? Indian players 'hit' or 'cajoled' Yubuta?



attorney for the suspended players. Meeting of the FIH. India's case went unrepresented at Brussels. As always, the players are a victim of the inefficiency of the IHF.

Once the suspensions were intimated, the IHF reactions to alleviate the issue were pathetic and amateurish. No cogent explanation was presented. Instead, they decided to rush Aslam Sher Khan, former Olympian and now Congress(I) MP from Betul to Brussels to plead India's case. It was later realised that Aslam Sher Khan had no locus standi either in the IHF or worthwhile equations with top administrators in the FIH.

IHF officials further complicated matters by saying that reserve full-back Iqbaljit Singh was involved in the fracas rather than centre-half Hardeep Singh. This was done to protect Hardeep Singh, as the IHF officials felt that it was not possible to find an adequate replacement in the centre-half position. Iqbaljit Singh was being made a scapegoat.

The fissiparous tendencies were revealed when Ashwini Kumar, Vice-President International Olympic Committee (IOC) and former President of the IHF, circulated the story that there was a move to dis-affiliate the IHF from the FIH. Happily, Etienne Glichitch, President of the FIH, denied any thinking on such a move. Unfortunately, hockey administration in India

WAIT UNTIL OCTOBER

The suspended players now have to wait till October before they know what their fate will be. M.A.M. Ramaswamy, Vice-President of FIH and former President of IHF, met Glichitch in an attempt to resolve the issue. The IHF too has changed its stand. Realising that there was no point in 'playing' around with the issue, it tendered an unconditional apology to the FIH and requested it to reconsider its "harsh" decision. Which will be done only when the FIH receives the report of the Japanese chief technical delegate at the Dhaka tournament.

has many enemies within, which further complicates the confusion.

The IHF sent a new-look team to the four nations tournament in Holland in June. India were beaten 1-2 by England, 1-4 by West Germany and thrashed 0-8 by Holland, (West Germany were the ultimate victors). Suddenly the value of the suspended players increased, though it is a sad reflection on the state of Indian hockey that the absence of six players led to such deplorable defeat. There is obviously lack of depth of talent in Indian hockey.

Better late than never, the IHF have decided to present a cogent case to the FIH and convince them that the Indian players had no *male fide* intentions. Even Glichitch agrees that umpiring standards in regional competitions are mediocre. Indian hockey players can still be condoned. Was not a more serious sacrilege by the Pakistani team at the 1972 Munich Olympics condoned after a life ban on the entire squad? It is imperative that the IHF act efficiently in this matter, as it was their procrustean and fallacious policies which led to the suspension and termination of six players in the peak of their career.

THE GAME OF LOVE

The Davis Cup, the symbol of supremacy amongst tennis playing nations of the world, started in 1900. Dwight Davis, an American citizen, a tennis addict and an idealist started the championship when in 1900 he donated a huge silver bowl as a symbol of friendly tennis competition amongst nations. The tournament was named after him and the ideals were to promote tennis and friendship amongst nations.

The Davis Cup has stood the test of time. The rules of the championship have been frequently altered, political systems of participating nations have changed but the idea and the ideal are immutable. The court is always 78 ft by 36 ft and the highest standards of sportsmanship are demanded within those lines.

In these iconoclastic years of planned obsolescence, the Davis Cup endures as few other 84-year-old institutions have done. In the words of Arthur Ashe, 1975 Wimbledon champion and non-playing captain of the American Davis Cup team for many years, "The Davis Cup is not a place or a player, a cup or a contest, a name or a notion. It is an idea and will always be just that."

In the inaugural year of the competition, the US won the Davis Cup beating Great Britain 3-0 in the final. Since then the championship has been an annual feature except during the years of World War I (1915-18) and World War II (1940-45) and in 1901 and 1910 when there were not sufficient entries. The US has won the Davis Cup for the maximum number of times, with 28 victories, followed by Australia with 23 victories. The longest span of victories has been by the US, seven-in-a-row, between 1920 and 1926. The Davis Cup, however, has not been the monopoly of a few nations. Fifteen nations have reached the finals at least once. They are: the US, Australia, Great Britain, India, Belgium, Japan, France, Italy, Mexico, Spain, Rumania, West Germany, South Africa, Sweden and Czechoslovakia.

India's match in the 1985 Davis Cup against Sweden is scheduled to be held in Bangalore from Aug 2-4. World ranked players like Mats Wilander, Anders Jarryd and Stefan Edberg will be seen in action for the first time in India. This is one of the major charms of the Davis Cup. Spectators in developing nations like India which cannot afford to stage lucrative prize-money tournaments get to see world class players only during Davis Cup ties.

India's participation in the Davis Cup has been a regular feature for over half a century. In 1921 India first participated in the Davis Cup and the All India Lawn Tennis Association was affiliated to the then International Lawn Tennis Federation (ILTF, now ITF, i.e., International Tennis Federation) in 1925. The halcyon days of India's participation in the Davis Cup were in the sixties and early seventies. The trio of Ramanathan Krishnan, Jaideep Mukherjee and Premjit Lal was responsible for India's excellent Davis Cup record over several years in the sixties. The pinnacle of glory was achieved when this trio led India to the Challenge Round for the

in a closely contested final in Calcutta, India went on to meet holders Australia in the Challenge Round. The Aussies had Wimbledon singles champion Roy Emerson and runners-up Fred Stolle and doubles champions John Newcombe and Tony Roche in their squad and so expectedly won 4-1. However, India performed creditably with the doubles pair of Krishnan and Mukherjee gaining a memorable triumph over the Wimbledon champs Newcombe and Roche.

During the seventies, India's Davis Cup challenge was spearheaded by Vijay and Anand Amritraj and Shashi Menon. In 1974 India reached the finals of the Davis Cup and had a good chance of winning the prestigious trophy outright as their opponents South Africa were not a very formidable squad. However, India chose not to play against South Africa because of their policy of apartheid (South Africa is now suspended from participation in the Davis Cup).

The Davis Cup rules and format have undergone many changes. From 1900 till 1971, the Challenge Round existed. This meant that the previous year's holders did not participate in the tournament itself but played the ultimate inter-zonal winner in a decisive tie known as the Challenge Round. The winner of the Davis Cup for a calendar year was the victor of the Challenge Round tie. So often the winner of the Davis Cup played just one match.

In 1972 the Challenge Round was abolished and the inter-zonal winners played each other on a knock-out basis with the US and Rumania reaching the final with the former winning 3-2. Another significant change took place in 1974 when the competition was thrown open to professionals for the first time.

In keeping with the spirit of the times, the Davis Cup also obtained corporate sector spon-

PASSAGE TO VICTORY



In his fairy-tale passage to the Centre Court at Wimbledon, Boris Becker, the 'Wonderkid' left a trail of scarred and stupefied opponents. At 17, this adolescent from Leimen, West Germany, became the youngest and the first unseeded player to win a Grand Slam title.

declining as there was no prize money at stake and so the best players like Jimmy Connors often did not play in Davis Cup matches. The new ITF President Philippe Chatrier was determined to rekindle the tradition and aura of the event. He hence sought corporate sector sponsorship. Nippon Electric Corporation of Japan annually puts up \$1m in prize money to be shared amongst the participating nations. Winners in each round get a stipulated amount. A new format was also introduced to resurrect spectator interest. The new format initiated in 1981 changed the cup into a two-tier contest with a 16-nation top group and the rest playing in zones on a regional basis. This format offers

more Davis Cup matches spread over fixed dates throughout the world which are so arranged that they do not clash with major international tournaments. The leading professionals now do not have to alter or miss their tournament schedule to play in the Davis Cup.

Spectator interest in the Davis Cup is once again aroused. Around 3,44,322 people watched the Davis Cup in 1982 whereas attendance rose to nearly 4,00,000 the following year. So the Davis Cup remains as popular as ever, a symbol of friendship amongst nations participating in sporting contests and impeccable behaviour on court, values rapidly declining in contemporary times.

N.K.

A new Asian record was set in the women's when Zhu Hong Yang of China threw the spear to a distance of 63.88 m at the national championships in Shanghai on Jun 9. This improved the existing record by 1.44m, held by compatriot Tang Guoli since 1981.

At the East German national championships, held in Leipzig, on Jun 5, Silke Hoerner (GDR) swam the 200 m breaststroke in 2:28.33 to just about break the old mark of 2:28.36 set by Lina Kachushite of the Soviet Union.

The great showman of world athletics, Willie Banks of USA, shattered the 10-year-old world record for the triple jump when he hop, step and jumped to cover a distance of 17.97 m in the US Outdoor Track and Field Championships at Indianapolis on Jun 16. The earlier record was 17.89 m set by Joao Oliveira of Brazil in Mexico City in 1975.

Thus, now there are still three world marks which have stood since 1963 Olympic Games in Mexico City—almost 17 years. The long jump record—8.90 m (29 ft-2½ in) is being threatened by Carl Lewis, who is reputed to have crossed the mark during training. The other two—(i) 400 m in 43.36 sec by Lee Evans and (ii) 4x400 m in 2:56.1 by the US quartet of Vince Matthews, Ron Freeman, Larry James and Lee Evans—are both likely to stand till the 1990s.

Tian Bingyi (China) 5-15, 15-7, 15-9.

Women's Singles: Han Aiping (China) b Wu Jian Qiu (China) 6-11, 12-11, 11-2
Doubles: Han Aiping & Li Lingwei (China) b Lin Ying and Wu Dixi (China) 15-9, 14-18, 15-9
Mixed Doubles: Joo Bong Park & Sang Hee Yoo (South Korea) b Stefan Karlsson & Maria Bengtsson (Sweden) 15-9, 12-15, 15-12

SANJEEV GUPTA

AROUND THE TRACK IN 30 DAYS

Athletics

In the 100 m sprint, Olympic champion Lewis was defeated over the distance for the first time in two years, when he came fourth in the semi-finals—in 10.34 sec—slow by his standards.

Cricket

England gained a five-wicket win over Australia in the First of their six-match 'Ashes' series, on the fifth and final day—Jun 13—at Leeds.

Tennis

The first of the four annual Grand Slam events, the French Open, ended at the Stade Roland Garros in Paris on Jun 9.

Results: Men's Singles: Mats Wilander (Sweden) b Ivan Lendl (Czech) 3-6, 6-4, 6-2, 6-2.

Women's Singles: Chris Evert-Lloyd (USA) b Martina Navratilova (USA) 6-3, 6-7, 7-5.

Doubles: Martina and Pamela Shriver (USA) b Claudia Kohde-Kisch (FRG) and Helena Sukova (Czech) 4-6, 6-2, 6-2
Mixed Doubles: Hein Gunthardt (Swiss) and Martina (USA) b Francisco Gonzalez (Paraguay) and Paula Smith (USA) 2-6, 6-3, 6-2

WHAT'S NEW

will be introduced in the Olympics at the next Games in Seoul (South Korea) in 1988

* * *

Organisers of the 13th Commonwealth Games announced that 'MAC', a Scottish reiner, has been adopted as the official mascot of the Games, to be held at Edinburgh in June 1986.

Heads that rolled on the way: None other than John McEnroe and Jimmy Connors, beaten in straight sets by Wilander and Lendl respectively in the semi-finals

The World Championships ended at Calgary (Canada) on Jun 16 with total domination by the Asian countries—China and South Korea

Results: Men's Singles: Han Jian (China) b Morten Frost-Hansen (Denmark) 14-18, 15-10, 15-8
Doubles: Joo Bong Park & Moon Seok Kim (South Korea) b Li Yongfu &

(Continued from page 55)

For

■ Today's fantastic spectrum of information technology has placed in our hands tools that can scan and monitor every inch of the earth's surface—what lies beneath it or floats above it. It is imperative for India to make effective use of the new techniques not only to seek out new reserves of natural resources but to check the immense waste of its natural as well as human resources.

■ Hi-tech can help in the free flow of information so that the gains of scientific development percolate down to the common man. One satellite, for instance, can speak to more people than all the schools and colleges in the country put together.

■ If hi-tech industries have spawned a pollution problem, the solution to it also clearly lies in hi-tech. As the world becomes increasingly conscious of the need to protect and preserve its ecosystem, hi-tech is moving in to create new methods for curbing industrial pollution and reducing chances of industrial accidents to a minimum.

■ It is a fact that hi-tech does trigger off a consumer boom. But it is wrong to conclude that this will give rise to consumerism and erode human relations, traditions, and the culture of a country. The most technologically advanced country in the world, Japan, still retains its glorious culture and traditions.

Against

achievements. In the absence of pipelines from labs to farms all the progress we make seems to gather around the elite strata of the society, and our village folk remain untouched by the technological advancement which can make their lives much easier and healthier. Before we go in for import of some more hi-tech we must create conditions where its benefits can filter down to the grassroot levels quickly.

■ If hi-tech has helped man, it has also ushered in a host of problems, of which, the hazards it is creating for the ecology is the most serious. The Far Mile nuclear accident (US) and the Bhopal gas tragedy should be eyeopeners to what might happen if indiscriminate growth of hi-tech industries is encouraged.

■ Hi-tech leads to a mushroom growth of consumer durable articles promoting consumerism and eroding human ties and relations. It is also worth noting that apart from Japan no country which has modernised has succeeded in protecting its culture. This does not mean we should not modernise; by all means, we should. But modernisation should be woven into the fabric of our culture so that the process of modernisation appears to be growing from it (culture) rather than in spite of it. The two disparate concepts of modernisation and westernisation should be clearly distinguished in the minds of the masses.

S.R.

continued from page 27

cular age chosen.

The PEO also made the observation that in more than half the selected states five-year perspective plans had not been prepared. Neither had most of the District Rural Development Agencies (DRDA's) planning teams been organised. No effort had been made to develop capability for planning and formulation of viable schemes. To rectify these lapses, therefore, strengthening and unifying the administrative structure at various levels is imperative. Also the involvement of village assemblies when selecting beneficiaries will ensure that only the more deserving households are selected for IRDP assistance.

INDIA CONSORTIUM A HELPING HAND

Responding to a strong plea by India for continued concessional aid, the Aid India Consortium agreed to provide development assistance to the tune of \$4b. This development aid will help India achieve viability in balance of payments, a higher growth rate of exports and to maintain debt service ratio within reasonable limits.

The consortium meeting held at Paris was attended by representatives of donor governments of Australia, Belgium, Canada, Denmark, France, West Germany, Italy, Japan, The Netherlands, Norway, Sweden, the UK and the US. Apart from this representatives of multilateral financial and aid agencies including the Asian Development Bank, International Monetary Fund and the United Nations Development programmes were also present. While reviewing India's achievements on the economic front favourably, the consortium also endorsed its needs for continued concessional assistance to sustain economic development aimed at modernisation and alleviation of poverty.

Its \$4b assistance for 1985-86 which, in terms of SDRs (special drawing rights) is about 3.9b SDRs, registers an increase of 5.5% over the 3.7b SDRs in 1984-85. And this increase offsets the rate of inflation in donor countries. The World Bank, on its part, has managed to keep the aid at last year's level by increasing assistance from the International Bank of Reconstruction and Development (IBRD) at market rates thus making up for the reduced aid from the International Development Association (IDA) which is its soft loan affiliate. The bank's assistance will, therefore, be about \$2.5b while that of IDA will decline sharply from more than \$900m last year to \$650m in the current financial year. The IDA assistance has, in fact, registered a decline from 40% of the total IDA funds in 1980 to 23% this year. Rather regrettable considering that financial aid although constituting only 7% of the total investment, is still of crucial importance to India as it helps avert debt-servicing problems. And the reduced size of IDA VII from \$12b to \$9b coupled with the inclusion of China among IDA beneficiaries portends a further decline in this soft aid.

India's Seventh Five Year Plan envisages an average annual Gross Domestic Product (GDP) of 5%, an accelerated industrial development and export growth rate and lays stress on higher productivity, greater employment opportunities and primary reliance on domestic savings for financing of investment. Still it will need commercial loans, for the bulk of investment in the country is absorbed by infrastructure and, therefore, net transfer of resources is required for longer periods. And for that it has already established its credit worthiness in the international market, thanks to prudent debt management.

ASSAM

N DEEP WATERS

With floods and inter-state border conflicts with Nagaland disrupting life in Assam, the army and security forces have their hands full trying to combat these natural and man-made threats.

For, despite the talks between the CMs of Nagaland and Assam, a lasting solution to the frequent inter-border disputes between the two states has not been found. In fact, no sooner had the talks concluded than the trigger-happy Nagaland Armed Police resumed its attacks on border villages in Assam with impunity. Complete villages were razed to the ground and fleeing villagers shot as a result of which thousands of Assamese villagers had to be sheltered in relief camps. The cessation of border traffic further disrupted conditions. It was then that the Centre decided to intervene and hammered out an agreement between the warring states which would ensure immediate restoration of normal flow of traffic on the Assam-Nagaland border as also the resettlement of the

Apart from this, the Assam police force was deployed on these routes to ensure uninterrupted flow of essential commodities to Nagaland through Assam. The Centre has also decided to make informal inquiries into the recent violence to identify the police personnel indulging in lawlessness and take strong action against the guilty. Meanwhile the resumption of talks between the agitating Assamese leaders and the Centre have also been put off till some normalcy is restored in the state.

Meanwhile, the onset of monsoons brought their share of miseries for north-eastern India as a whole and Assam in particular. The Brahmaputra and its tributaries rose above the red mark in several places owing to incessant heavy downpours. Flooding of the Barak and Kushiara rendered 50,000 people in Assam homeless. All rail, road and air links were totally disrupted. Army had to be called in for massive rescue operations. Tripura, too, was in the same deep waters with the Manu and Deo rivers rising dangerously above all previous flood level records. It drove about 60,000 people into make-shift camps.

And, with an end to the monsoons nowhere in sight at the moment and with little hope of an early solution to the numerous problems in the north-east, the forecast is rather gloomy.

DRUG POLICY

PANACEA FOR PILLS

In yet another move to liberalise the critically important drug industry, the government, in early June, announced the delicensing of 82 essential and mass consumption bulk drugs as well as their formulations and threw their manufacture open to all sectors of the pharmaceutical industry. As a first step in this direction the Centre had earlier delicensed 12 drugs in March, this year.

With this announcement all pharmaceutical firms, whether large or small, private or public, wholly Indian or part-foreign owned will be able to freely make and sell bulk drugs and their formulations, that is, the final packaged form in which chemicals are traded and consumed. These delicensed drugs will no longer require a license under the provisions of the Industries (Development and Regulation) Act, subject to the provision that the industrial undertaking does not fall within the purview of the Monopolies and Restrictive Trade Practices (MRTP) Act or the Foreign Exchange Regulations Act (FERA). Apart from this the article of manufacture should not be reserved for the small-scale sector either. Another condition is that the concerned industrial undertaking should not be located or even proposed to be located within standard urban limits of a city with a population of more than 10 lakhs as determined in the Census of India 1981, or within the municipal limits of a city with a population of more than 5 lakhs. However, the delicensed units will be required to register themselves with the Secretariat of Industrial Approach (SIA), Department of Industrial Development.

This registration of delicensed industrial undertakings will be subject to clearance by the concerned Central and state authorities with regard to foreign collaborations, capital goods, pollution control, hazardous processes, and, most importantly, the environment angle.

The 82 delicensed drugs belong to 29 therapeutic groups ranging from vitamins to antibiotics, anti-TE and anti-leptotics to hormones, psychotherapeutic drugs to muscle relaxants and cardio-vascular drugs to pain killers.

This latest drug policy comes as a complete anti-thesis of the earlier drug policy and in net effect will deprive the Indian sector, both public and private, of protection granted to it under the 1978 drug policy which was essentially responsible for its growth in the past few years. Also the entry of foreign firms as formulators which this policy ensures will not only deprive Indian drug companies of profits but may well prove to be a setback for the processes of indigenisation and technology upgradation.

J.S.

HIGH BILLING

In the just ended Budget Session the Lok Sabha has given a creditable performance. For, the passing of over 20 Bills of crucial national importance apart from the various Bills relating to the Budget is no mean feat! Important among these Bills were the Bhopal Gas Leak Disaster (Processing of Claims) Bill, the controversial Andhra Pradesh Legislative Council (Abolition) Bill, the Arms (Amendment) Bill, and lately the Terrorist and Disruptive Activities (Prevention) Bill. The House was also able to discuss the detailed Budgetary demands of 15 ministries.

LATEST IN SCIENCE

Using forward engineering which can be used to design tailor-made systems and hence are broader in scope and have wider applications.

Mysterious Black Holes

BLACK HOLES are so dense that no light or radio waves can escape from them. How, then, can astronomers unravel their mystery? The answer lies in gravity waves. According to Einstein's general theory of relativity, the collapse of a star or any other event that generates a lot of mass movement quickly, should result in a change in gravitation.

However, nobody has seen a gravity wave so far. Since the sixties Dr Joseph Weber and his colleagues at the University of Maryland in America have been trying to 'catch' a gravity wave by watching massive bars of aluminium for minute contractions and expansions.

Researchers at Stanford University, the Cern Laboratory in Geneva, Louisiana State University and the University of Maryland are preparing a new international gravity wave hunt. They are planning to use supercooled aluminium bars which would cut out much of the noise from random atomic motion within the bars.

However, since the detectors can cap-

ture events only within our galaxy and since stars collapse within our galaxy only once in 30 years, we may still have a long way to go before some light is shed on the black holes.

Computer Consultants

IN SPITE of the giant steps taken by science, computers are still a long way from imitating the logic and reasoning—much less the complex creativity and subtlety—of human thought. But that does not mean that they are not trying.

The latest in computer software are the expert systems which are programmes that store human expertise on a disc making the computer a consultant. They have two key components, namely, a specific knowledge base of information and a logic system which applies the appropriate part of the stored data to solve a problem.

All that the layman has to do is to have an electronic question-and-answer session and thus receive help from the computer. Besides these easy-to-use pre-programmed systems, there are 'shells' or

New Look For You

TO SEE what you would look like in different hairstyles you do not have to go to the barber and actually have a hair-cut anymore. The computer can show "you" in different hairstyles and you can then decide which one you look best in.

This image-processing system has been made possible by combining the life-like freeze frame pictures of video cameras with a computer's graphics capabilities. By reproducing existing images onto computer monitors, video cameras can provide an electronic first draft 'sketch'. Computer graphics programmes can then be used to manipulate the frozen images without altering the original pictures.

These image-processing systems will prove to be of tremendous use for plastic surgeons, orthodontists, hair-replacement and styling centres, cosmetic artists, etc. It is also expected that in future this will find applications in electronic mail, business graphics slide shows and at-home video shopping.

A.S.

Answers to

TEST YOUR WORD POWER

- apprehend:** A: to arrest; take into custody. Computer technology is helping law-enforcement officers seek, identify and apprehend criminals with far greater speed than in the past.
- austere:** D: harsh; without comfort or luxury; simple and plain; severe. Though Hanoi has more vitality than in its austere wartime days, life for the more than two million inhabitants is stark.
- avid:** D: greedy; urgently eager; enthusiastic. Judging from the merchandise available in the Chongqing (China) department stores and the thousands of bazaars and shops, city residents have become avid consumers.
- barricade:** A: to block off with an improvised fortification. Tensions between the Akalis and the Centre came to a head in June '84 after armed Sikh radicals barricaded themselves in the Golden Temple in Amritsar, Sikhdom's holiest shrine.
- berserk:** A: be, go uncontrollably wild; violently destructive; frenzied; crazed. The TSP (Tamil Nadu Special Police) went berserk on All Fools Day, beating up sleeping civilians, looting and damaging public property worth thousands of rupees.
- brawl:** B: noisy quarrel or fight; row. Beer brawls have become a regular event at American hockey and football games.
- buoy:** A: to raise the courage or spirits of; keep up hopes. While the recent change in the Sudanese Government has buoyed the national mood, the country's awesome problems remain.
- dismember:** A: to divide up (a country, etc); partition; tear or cut the limbs of. Ten years ago Pol Pot's Khmer Rouge guerillas swept into Phnom Penh and began their sadistic work of dismembering Cambodia.
- erode:** A: to wear away; eat into. The mammoth storm surges caused by cyclones can erode 30 to 50 ft of beach within an hour.
- fad:** D: fanciful fashion, interest, preference unlikely to last. One way or another, students in the Soviet Union often adopt, belatedly at least, Western fads.
- glare:** C: strong, fierce, unpleasant light. Mesh screens are the simplest and cheapest way to cut glare from VDTs (video display terminals) which causes eye-irritation, fatigue and focussing problems to the VDT users.
- levy:** A: to impose; collect by authority or force. Britain's National Union of Journalists has a stern code of conduct and wide-ranging powers to levy fines against those who violate its rules.
- lump:** D: hard or compact mass usually without a regular shape. Recently biochemists at NASA's Ames Research Center in California presented evidence that life on earth may have gotten its start in lumps of clay.
- lurid:** C: violent and shocking; sensational, causing horror or revulsion; gruesome. Scotland had a lurid history of soccer turmoil until it banned the sale of alcohol at stadiums; hooliganism dropped sharply.
- mirage:** C: any illusion or hope that cannot be realised. The continuing anarchy in Beirut shows that *pax Syriana*—the once vaunted ability of Mr Assad's Syria, and nobody else, to impose peace on Lebanon—may still be a mirage.
- notion:** B: idea; opinion; view; conception. The notion that factories should be allowed to funnel some of their profits back into expansion was first tried in Chongqing, the largest city in the world.
- ossified:** C: rigid; unprogressive. Young, smart and tough, Mikhail Gorbachov appears determined to impose new discipline and efficiency on the ossified Soviet system.
- referendum:** D: the submission of a proposed law to a popular vote. Recently, the Bangladesh President Lt Gen Hussain Muhammad Ershad captured 94% of the vote in a controversial public referendum on his rule.
- spartan:** C: frugal; marked by simplicity or avoidance of luxury and comfort. With their loose, undisciplined style, the Saigonese have never made the adjustment to the strict political controls and spartan economy that are tightening the screws on so much of the country.
- supersede:** A: to take the place of; supplant. Joginder Singh's (the father of Sant Jarnail Singh Bhindranwale) selection of a number of extremists as members of the ad hoc committee to run Sikh affairs indicated that it was an attempt to supersede the more moderate leadership of the movement.

Vocabulary Ratings:

20-13 correct	exceptional
17-15 correct	excellent
14-12 correct	good

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90. कर्क के अंगरे — रघु
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92. जीरो का घर — रघु
93. अंशुम सच — समीर
94. कोहरा — समीर
95. कुम्हरी का — समीर
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PERSONALITY DEVELOPMENT

Preparing For An Interview

BY PRABHA GOPAL

Selection at an interview is hinged on the image you portray before the board. So know yourself, your aspirations and interests thoroughly... and victory would be yours.

Ahl The interview letter! The words sound sweet music for the desperate job-seeker and even motivate him to toil hard. An interview call also means half the battle won, and carries the hope of total victory. Nevertheless, there is always a slip between the cup and the lip. So here's to help you reduce your slips.

The interview call is sent out only to a handpicked few selected from the myriad of applicants for the job. If you happen to be at the receiving end, you have to compete with a handful of those who have almost the same qualifications, ability and potential as you. And you have also to emerge as the best among these equals.

The purpose of an interview is to assess the candidate's personal traits and behaviour, which, in the long run, play a vital role in efficient job management. It is also a forum where the employer tries to assess the credibility of the resume presented to him earlier, by the latter. It is not a 'strict cross-examination' but an information dialogue intended to judge the candidate's alertness.

The moment the interview letter is in your hands you have to remember that the ball is in your court. Success would entirely depend on your capacity to spin the ball to the best of your ability and skill. Now, this capacity needs to be developed by way of practice as does every other art. There is, in fact, a preparing strategy that can even see you through your maiden interview.

Strategy

The initial stages of preparation involve the defensive strategy of "knowing the enemy". Make an effort to learn all about the organisation you intend to work for and the nature of the work you would be expected to do. If you are shrewd enough you may try to analyse possible ways and means of improving the work methods. Such an analysis should equip you to

answer one standard question posed by most employers: "In what ways do you think you can make a contribution to our organisation and how do you think you can help us perform better?"

The image you portray in the interview is bound to be the turning point in your success. So know yourself and your plus and minus points. Here's where an honest self-assessment comes in handy. This would help you realise what you are ideally suited for and also answer questions like: "How would you describe yourself as a person?" "What are your aims in life?"

In the case of candidates with prior job-experience, questions like "What was the nature of work in your previous job?" "Why do you want to change your job?" figure most.

As part of your strategy for preparing for an effective interview, you may try to

coordinate with another student in mock interview sessions where one of you may assume the role of the interviewer, and the other the role of the interviewee.

Lastly, how you present yourself in the interview is as important as what you have to present. Dress appropriately and cultivate a sense of confidence in the presence of the interviewer; nothing conveys lack of self-confidence more than a limp handshake, a clumsy *Namaste* said in a shaky voice, fidgety hands or wandering eyes. Try to be relaxed and composed.

A word of caution on how and how not to answer the questions put to you by the board. Be candid, confident and fearless. At the same time do not be impulsive, arrogant or curt in case the board members try to corner you on a particular point. Be honest, for, honesty goes a long way.

(To be continued)

KEEP THE BALL ROLLING

One basic courtesy is often overlooked by job-seekers, after the interview. This is the letter in appreciation of the fact that they were given an opportunity to be interviewed. Such a prompt action would help in keeping their name fresh in the interviewers' mind; and, of course, the communication ball can also be kept rolling.

Two other kinds of letters are also important: the letter of acceptance and the letter of rejection. These letters should be promptly despatched as soon as the interviewee has accepted or rejected a job. See the sample letters below:

In Appreciation

Your Address,

Employer's Address
(If possible, use employer's name)

Dear

I appreciated the opportunity to talk with you on *(date)*. The information you shared with me about (name of the company) was excellent, and I am excited about the possibility of applying my education and experience to the position offered by you.

If I can provide you with any additional information, please let me know. I look forward to hearing from you soon.

Yours sincerely
(Signature)
Your name typed

Letter of Acceptance

Your Address,

Employer's Address

(If possible, use employer's name)

Dear

I am very pleased to accept your offer *(state offer)* as outlined in your letter of *(date)*.

(Mention enclosures—application, resume, or any other related information)

I look forward to meeting the challenges of the job and I shall make every attempt to fulfil your expectations.

Yours sincerely,
Signature
Your name typed

Letter Of Rejection

Your Address,

Employer's Address
(If possible, use employer's name.)

Dear

After considerable thought, I have decided not to accept your offer of employment as outlined in your letter of *(date)*. This has been a very difficult decision for me. Nevertheless, I thank you for your consideration. Your confidence in me is greatly appreciated.

Yours sincerely,
(Signature)
Your name typed

UTILITY OF MAPS-3

BY N.K. HANS

Questions on map interpretation are a part of competitive exams, viz. Civil Services Prelims, Bank PO exams, etc. This is the third in the series on map reading, emphasising on India's physical features.

Understanding our country India is understanding its geography, polity, economy, history and other social and cultural aspects. It is rather interesting to study these aspects through maps. Geography and maps are very closely related. Map-1 shows some of the physical features of India, a country of great geographical extent. India, as you see, is well marked off from the rest of Asia by mountains and seas which give it a distinct geographical entity. Bounded by the Himalayas in the north, it stretches southwards and at the Tropic of Cancer, tapers off into the Indian Ocean between the Bay of Bengal on the east and the Arabian Sea on the west.

At the macro-level the Indian sub-continent may be divided into three broadly defined physiographic units: (a) The Himalayan and the associated moun-

tain chains (b) The Indo-Ganga-Brahmaputra plain; and (c) The peninsular plateau.

The boundary line between the arc of the Himalayan ranges and the plains of India is clearly marked out. This, however, is not so in the case of the boundary line between the plains and the peninsular plateau. The Himalayan mountain chain, all along its longitudinal axis, is arranged in a series of three parallel ranges sometimes referred to as (i) Great Himalayas (ii) Lesser Himalayas and (iii) Sub-Himalayas; at other places they are called the inner, the middle and the outer Himalayas. Contours are the iso-lines joining the places of same height. As you see in Map-1 the contours have been drawn at heights of 1,200 ft, 3,000 ft, 4,500 ft, 6,000 ft, 9,000 ft, 12,000 ft and 18,000 ft. The altitude as well as physiographic complexity increase from the outer to the innermost Himalayan ranges. The Great Himalayas which have an average altitude of 6,000 m have, within them, almost all the prominent Himalayan peaks like Mt Everest (8,848 m), Kanchenjunga (8,598 m) and Nanda Devi (7,817 m) (shown in the map as 1, 2 and 3 respectively). In the northwest the Himalayan ranges coalesce with the diversely arranged mountain chains of the Kara Koram, the Hindukush, Kunlun, Pamir, etc. Also note the positions of Sulaiman

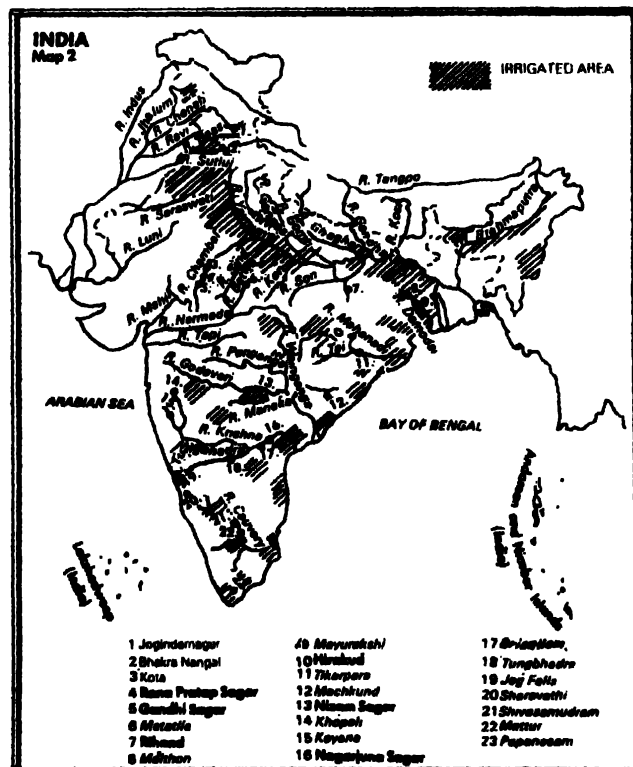
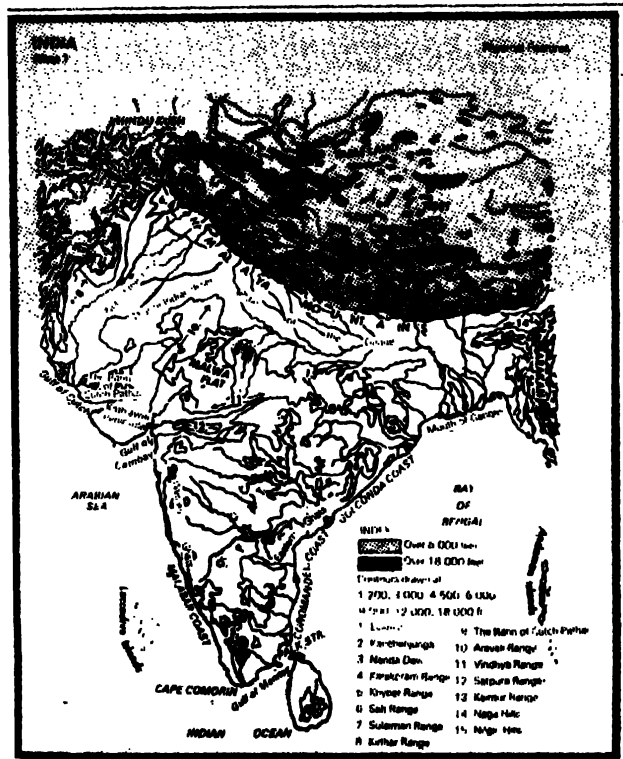
ranges, Salt ranges, Kirthar ranges and the Naga hills.

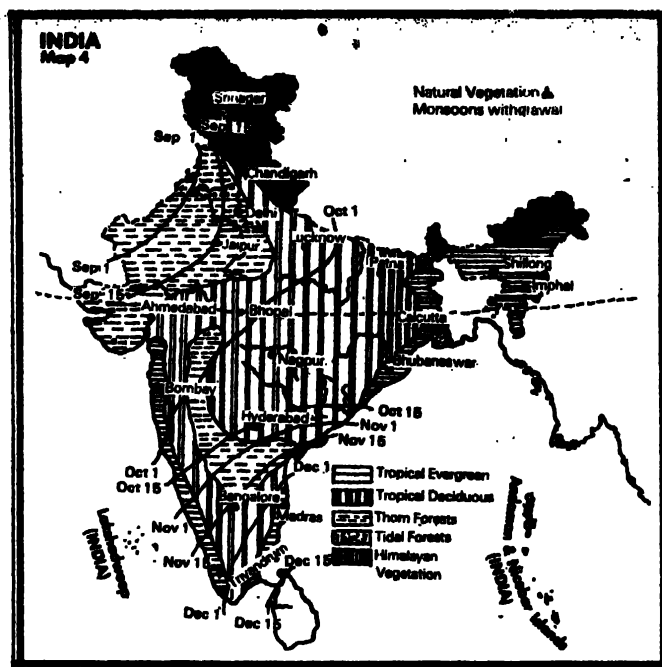
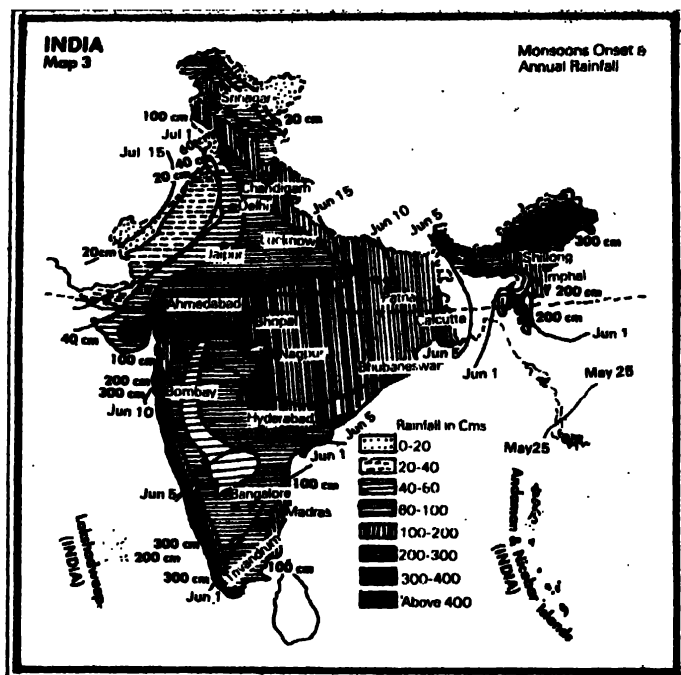
The Plains

The great plain of India, formed by the Indus, the Ganga and the Brahmaputra rivers has been an area of immense significance. Generally the plain is recognised as consisting of four divisions, each characterised by important differences in surface relief. They are (i) Bhabar (ii) Terai (iii) Bhangar and (iv) Khadar.

Rising from the alluvial plains of UP and Bihar, south of the Yamuna-Ganga line, the great Indian plateau extends towards the south to encompass the entire peninsula. The outlying projections of the peninsular plateau represented by the Aravallis, Rajmahal and Shillong Hills mark the northern limits of the Himalayas. The plateau first slopes to the north and the east and thereafter the Vindhya-Kaimur range to the west. The topography of the Deccan and the Karnataka Plateaus is dominated by the Western Ghats. Near Goa, the Ghats dip to 900 m but rise once again in the Nilgiri Hills. The Eastern Ghats are less impressive and form a discontinuous crest on the eastern periphery of the plateau. They are represented by an irregular line of hills, such as the Nallamalais, Velikondas, Palkondas and the Pachmalais.

The Indian islands in the Bay of Bengal consist of the Andamans (about 200 islands) and the Nicobar (19 islands), group extending for 350 km. The Arabian Sea islands consist of the Lakshadweep group formed by the coral deposits off the





Kerala coast.

River System

Map-2. depicts the Indian river system and its potential uses in terms of irrigation, thermal and hydel power projects, etc. Broadly speaking the river systems of the country can be classified on the basis of their origin, viz. (i) The Himalayan rivers and (ii) the peninsular rivers. The Himalayan rivers belong to three principle river systems—Indus, Ganga and the Brahmaputra, originating on the southern slopes of the Tibetan highlands. Initially they flow parallel to the main axis of the mountains in longitudinal troughs and then take a sudden bend towards the south piercing the towering mountain crest to reach the plain. The Himalayan rivers are typical examples of antecedent drainage.

The Indus river rises in Tibet near the Mansarowar lake and receives. Himalayan tributaries such as Gartang, Zaskar, Dros, Shyole, Shigar, Nubra, Gilgit and the Aunza in J & K. Near Altock it receives the

Kabul and its tributaries. Some of the important tributaries below Altock are Kurram, Tochi and the Zholo-Gomal. The collective flow of its well-known Punjab tributaries—Sutlej, Beas, Ravi, Chenab and Jhelum (their ancient names being Sutudri, Vipas, Parushri, Asikni and Vibsta respectively and the Greek names being Zaradrus, Hyphasis, Hydraotes, Akesines and Hydasper, respectively), goes to make the Panjnad which falls into the mainstream a little above Miltrawkot.

With a total length of 2880 km the Indus is one of the larger rivers of the world. India can utilise only 20% of its total waters as per the Indus Water Treaty with Pakistan. River Jhelum rises in Verinag; Chenab, Ravi and Beas in the Himachal mountains and the Sutlej in Tibet.

The Ganga rises in the Himalayas and flowing south-westwards branches out from the hills near Haridwar. Tributaries on the right include Jamuna, Son, Punpun

and Tonis, and on the left Ramganga, Gomati, Ghaghara, Gandak, Kosi and the Mahanadi. In Bangladesh it flows as River Padma.

Major rivers of the peninsula such as Mahanadi, Godavari, Krishna, Cauvery flow eastwards into the Bay of Bengal. Rivers which flow westwards are generally small. Narmada and Tapi are the important west flowing streams which occupy structural depressions. The Godavari rising in Nasik district of Maharashtra and joining the Bay of Bengal in Andhra Pradesh is the longest of the peninsular rivers. It is often referred to as Vridha Ganga or Dakshin Ganga.

To utilise the water resources of the river system several dams, river valley projects and hydel power projects have been constructed. (see Map-2). Yet India remains a rain-fed country and monsoons play a very important role in agriculture and natural economy

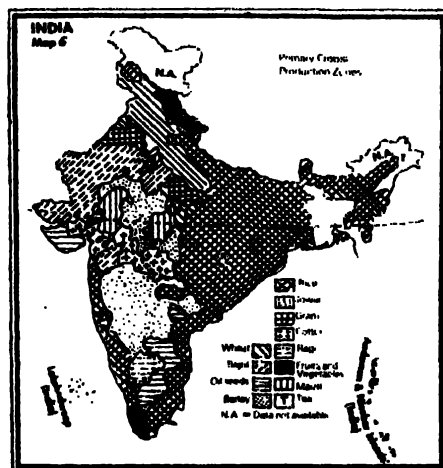
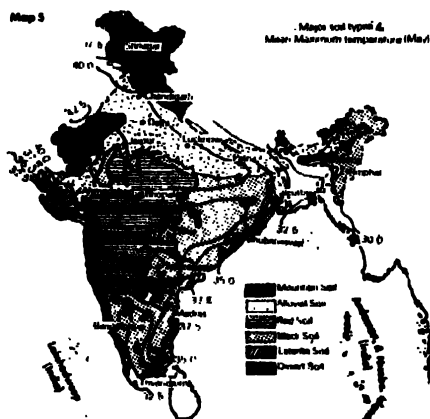
Rainfall

Map-3 shows the distribution of annual average rainfall in different parts of the country. There are areas where there is virtually no rainfall and others where it rains almost throughout the year.

The same map shows dates of the onset of monsoons. The Indian sub-continent receives the bulk of its rainfall during the southwest monsoon period. In about a month's time, the rain-bearing winds which are strong, blowing at an average speed of 30 km per hour, cover almost the entire country. Note the date and directive shown in Map-3.

The south-west monsoon begins to retreat from north India by the second week of September. Unlike the sudden burst,

(Continued on page 67)



ESSAYS

What do written tests, group discussions and interviews have in common? Water pollution, freedom of the press, social forestry, 'freak' TV transmissions...

You could be asked to write, talk or discuss steps being taken to curb the first (topic), or the significance of the second in a democratic polity, or the importance of the third in present times, or what's responsible for the fourth... For substantial answers that should 'open' every door for you, here's some solid ground work.

CODE FOR THE PRESS?

For democracy to thrive, a free press is a must. It is not for nothing that the press is regarded as the watchdog of democracy. And since democracy is a way of life, the role of the press is as multi-faceted and multi-dimensional as life itself. In the course of playing this role, it often comes into conflict with the government. The Indian experience has been that from time to time, blatant as well as not-so-blatant attempts are made to curb the freedom of the press which, taken as an extension of 'freedom of speech and expression', is a Fundamental Right, guaranteed by the Constitution.

The constitutional restrictions on this right notwithstanding, a more elaborate code has been sought to be spelt out, the deliberations of the recently held state information ministers' conference in New Delhi being the latest attempt. It was suggested at the conference that the press does not follow any professional code or standards. However, it is a matter of common knowledge that this accusation can be justifiably levelled against only a section of the press. There is no conceivable reason why the more responsible section of the media should bind itself because of the lapses of a few.

Further, if any such code is to be effective, it cannot contain vague formulations so as to become practically irrelevant. It must comprise detailed do's and don'ts covering the entire gamut of life. The formulation of such an exhaustive code is next to impossible, and if it is made and implemented it would tantamount to enforcing rigidity in a line of work that needs flexibility. After all, everyday situations are so fluid and complex that the press, in order to possess a semblance of credibility, must be free from any straitjacketing. Exactitude is therefore unreasonable. **only broad principles should act as a**

There are already quite a handful of legal and constitutional guidelines, which constitute the framework within which the press is required to function. When a section transgresses, it can be hauled up before the Press Council. Moreover, the Council itself has built up the equivalent of case law through adjudicating on a variety of matters. There is, therefore, no dearth of codes for the press.

Under the circumstances, any enlightened citizen cannot help but feel that suppression of facts is what is aimed at by the protagonists of such a detailed code of conduct. It is a fact that Indian public opinion has matured. Prompt dissemination of accurate and complete information, soberly portrayed, can easily mobilise the vast majority of law-abiding and right-thinking people against evil-doing. Therefore, undue official interference must be avoided. After all, if the press is to become responsible, the government must first take the initiative to be responsive. V.K.

SOCIAL FORESTRY

After the popular appeal of the Chipko movement and its southern counterpart, the Appiko movement, the social forestry programme has again given India's rural population something to think about.

Though initially introduced by the National Commission on Agriculture (NCA) in 1976, the aims of the social forestry programme were clearly articulated in the Sixth Plan (1980-85) which allocated Rs

FOR THE FORESTS

India's forests certainly deserve a better deal. Recent researches conducted by the National Remote Sensing Agency, Hyderabad reveal that the total geographical area under forest cover is just 14.10% which is far below the minimal figure of 33% necessary for maintaining the right ecological balance as established by the National Commission on Agriculture.

Despite the enactment of the Forests (Conservation) Act, 1980 by the Government of India, for the prohibition of the conversion of reserved forests into any other type of forest land or its use for any non-forest purposes without prior permission of the Central Government, the heaviest depletion has occurred in these reserved areas. The worst affected states are Haryana, Rajasthan, West Bengal, Jammu and Kashmir, Maharashtra and Gujarat. In this critical situation, the successful implementation of the social forestry programme is undoubtedly imperative.

3518m or 51% of the total amount reserved for forestry for its financing. The major objective of this policy, as stated in the Sixth Plan, is to make India's rural population self-sufficient in terms of food, fodder fuel and other domestic needs, as well as to meet the requirements of village industries.

In rural India since firewood is one of the primary sources of energy, it became evident that the rapid denudation of forests, especially over the last few decades, due to the effects of industry, commerce and population pressure, would ultimately lead to the collapse of the firewood economy and thereby place great pressures on energy from mineral resources. Therefore, to avert this crisis the social forestry programme with special emphasis on increasing the quantity of fuel wood, bamboo and timber to fulfill the growing fuel requirements of the countryside, was enunciated.

The first four years of the Sixth Plan saw the planting of trees on 1,20,000 hectares of land. With the help of foreign assistance social forestry projects have been launched in nine states including Gujarat, Punjab, Karnataka, West Bengal, Kerala, Meghalaya. Recently, Bihar started its own social forestry programme too. The World Bank, Sweden, USA and Canada have provided assistance in the implementation of these projects. The Government has also taken special interest in the area and this is reflected in the PM's decision to create a separate ministry for forests at the Centre.

A major factor in support of the social forestry programme is that a great deal of rural land is available which is unfit for cultivation and hence can be utilised for the growing of trees, thereby serving a dual purpose of providing fuel wood for the villagers and timber for small village industries. Besides, if such land is not utilised it usually becomes useless for any kind of cultivation due to ecological deterioration. Also, apart from protecting the soil and environment, such a policy has the merit of providing rural employment.

This programme has involved the planting of trees in government-owned and panchayat lands and other public areas in the villages. Provisions are also made for the planting of trees along roadsides. In the case of individual cultivators, efforts are being made to raise private sources of wood and orchards on their lands.

Small and marginal farmers owning less than two hectares of land in unirrigated areas comprise the backbone of this programme. Within this category, any farmer who raises a plantation in a maximum area of half a hectare is given cash incentives for the first three years in addition to free seedlings. Efforts are also made to involve

the scheduled tribes and castes, landless labourers and rural women-folk. The leadership for this programme has come mostly from primary school teachers and other local leaders owning little land

Within the short time period of its operations, certain doubts have been cast regarding the results of the social forestry programme. The type of trees usually planted such as the eucalyptus, are those which fulfill industrial and commercial requirements, and therefore the social and environmental purposes which constituted the principal aims of the programme have been neglected. Further, the major beneficiaries are not entirely the weaker sections, but the relatively better-off medium and larger farmers. However, it is hoped that these passing obstacles will be eliminated in the pursuit of the overall objectives of the programme.

A.N

WATER POLLUTION IN INDIA

The recent setting up of the Central Ganga Authority to cleanse the polluted Ganga has suddenly increased public awareness of the problem of water pollution in India. While the Ganga is the largest river system in the country and carries 25% of India's water wealth, the pollution scene in other major rivers is no less alarming. According to a survey by the National Environmental Engineering Research Institute, Nagpur, more than 70% of the available water (estimated at over 1,000b cubic metres per year) in India is polluted. Unlike the industrialised countries of the West, the major source of pollution in Indian rivers is human and municipal wastes. Industrial effluents account for only 20% of the total pollutants. Most of these wastes are discharged untreated into the water courses. Out of India's 3,119 towns and cities, only 217 have partial or full sewerage and sewage treatment facilities. These cover less than a third of the country's urban population. And, even though India is predominantly a rural country, one out of five Indians lives in urban areas. Urban population makes up almost a fifth of India's total population. The most revealing fact is that more than half of the country's total urban population lives in only 142 cities which have a population of more than 1,00,000 each. One-fourth of the total urban population lives in nine metropolitan cities only, each of which has a population of 1m or more. Untreated wastes from such highly concentrated human populations, when discharged into rivers cause havoc with the ecosystem. People drinking contaminated water fall prey to a host of illnesses which cost the country dearly. It is estimated that nearly two-thirds of all illnesses in India are related to water pollution. Water borne

WATER SUPPLY AND SEWERAGE FACILITIES IN MAJOR INDIAN CITIES

City	Population (1971)	Source of water	Qty. of water supply (MLD)	If sewerage exists	Fraction served by sewer	If sewage treatment plant exists
Ahmedabad	17.41,522	Tubewell and river	295.00	Yes	95%	Yes
Allahabad	5.13,036	Tubewell and river	115.95	Yes	50%	No
Bangalore	16,53,779	River	290.56	Yes	100%	Yes
Baroda	4,67,487	Tubewell and river	90.80	Yes	80%	Yes
Bhopal	2,84,859	Lake and tubewell	43.13	No		
Bombay	59,70,575	River and Lake	1452.80	Yes	50%	Yes
Calcutta	70,31,382	Tubewell and river	619.90	Yes	5.5%	No
Chandigarh	2,32,940	Tubewell	113.5	Yes	100%	Yes
Cuttack	2,05,759	Tubewell	35.23	Yes	25%	No
Delhi	36,47,023	River	885.30	Yes	75%	Yes
Gauhati	2,00,377	River	34.05	No		
Hyderabad	17,96,339	River	270.00	Yes	50%	Yes
Jamshedpur	4,56,146	River and lake	108.96	Yes	100%	Yes
Kanpur	12,75,242	Tubewell and river	206.38	Yes	100%	No
Lucknow	8,13,982	Tubewell and river	190.68	Yes	50%	No
Madras	32,69,930	River and lake	218.83	Yes	75%	Yes
Mysore	3,55,685	River	47.67	Yes	50%	Yes
Nagpur	9,30,459	River and lake	181.60	Yes	75%	Yes
Patna	4,91,217	Tubewell	95.79	Yes	25%	Yes
Pune	11,35,034	Canal	379.09	Yes	75%	Yes
Trivandrum	4,09,627	River	72.64	Yes	50%	No

MLD = Million Litres per Day

Source: Central Board for the Prevention and Control of Water Pollution.

diseases such as jaundice, cholera, diarrhoea and dysentery take a heavy toll every year. About 73m workdays are lost each year due to water-related diseases.

Untreated sewage affects the quality of water in two ways—by reducing the level of dissolved oxygen and by increasing the concentration of harmful bacteria. When dissolved oxygen is reduced, fish and other aquatic fauna die. A high bacterial load makes the water unfit for human consumption.

Wastes discharged into a river comprise mainly dissolved solids and suspended matter. The latter include harmful bacteria such as those found in human faeces, which scientists call 'coliforms'. Normally, river water also harbours other useful organisms known as aerobes and protozoa, which purify the polluted water by killing harmful bacteria and degrading organic wastes into harmless products. These organisms normally obtain oxygen necessary for survival from the dissolved

oxygen in the water. The amount of oxygen required to sustain these waste-degrading organisms (expressed in mg per litre) is known as the biological oxygen demand, or BOD, of water. Clean, unpolluted water has a BOD of about three mg per litre. With increasing pollution load, BOD also goes up. But if it exceeds the level of dissolved oxygen in water, as happens if the pollution is very high, the waste-degrading organisms die and the river loses its self-purificatory mechanism.

One of the simplest ways to prevent this from happening is to control pollution at the source itself that is, to treat the sewage before it is discharged into the river. This is what has been proposed as the first phase of the Ganga Action Plan. Being India's largest river system, the Ganga has a catchment area of more than 9,00,000 sq km. The river's main course is more than 2,500 km long and covers 26% of India's land mass. There are 100 towns along the banks of the river including 27 with pop-

ulation more than 1,00,000. At the Central Pollution Control Board has shown that 34% of the total pollution of the Ganga is caused by sewage and industrial effluents from these cities.

The main plank of the Ganga Action Plan is the setting up of 54 sewage treatment plants in the 27 heavily populated cities along the river. The plan is to divert the sewage from these cities through a line parallel to the river bank so that the sewage can be treated scientifically at appropriate locations. At the treatment plants the sewage will first be allowed to settle in large tanks where solids will get separated from liquid. The separated solids will then be fed into a digester to produce methane gas and manure. The liquid from the settling tanks would then be passed through a biological aerator which would produce more solids and almost clean water. This clarified water will be used for aquaculture for growing algae and fish. The water flowing out of the aquaculture ponds can be used for irrigation or can be discharged into the river.

The most attractive feature of the whole scheme is its waste recycling capability. Each resource recycling unit will not only be cleaning the river but would also produce useful resource such as methane gas, manure and fish. According to an estimate of the Central Pollution Control Board, the treatment plants when commissioned, will yield a net profit of Rs 11 crore annually from the sale of manure, piped biogas, fish and irrigation water. If successful, it will blaze a new trail in water pollution control in India.

BIMAN BASU,

'FREAK' TV TRANSMISSIONS

One of the main disadvantages of television compared to radio is the inability of a TV set to receive programmes from a distant station. The normal range of even the most powerful TV transmitter is limited to a couple of hundred kilometres at the most, but radio programmes can be received thousands of kilometres away. The reason for this is the difference in the frequency of electromagnetic waves used in the two media. Frequencies used in common radio broadcasts (except FM) range from 550 kilohertz (kHz) to about 26,000 kHz, while television programmes are transmitted at frequencies between 30 megahertz (MHz) and 900 MHz (1 MHz=1,000 kHz).

The comparatively low frequency radio waves can be transmitted over long distances because they can pass through ground (as ground waves) or are reflected easily by the earth's ionosphere. But the very high frequency television signals can travel only in a straight line as far as the 'line-of-sight' from the transmitter because they are neither conducted through ground nor are they reflected by the ionosphere.

But sometimes TV signals are received from stations thousands of kilometres away. For instance, when the Madras station of Doordarshan started functioning in August 1975 with a low power transmitter, viewers in Madras often received, in the evenings, TV programmes from Calcutta, more than 1,400 km away. Viewers in Pune often received programmes from Karachi. On some occasions, signals from Chinese TV stations have

been received in Delhi. And now there are reports of Bombay TV programmes being received in Karachi.

Such 'freak' receptions occur only during certain periods of the day and in certain seasons. Several explanations have been put forward by scientists to explain these unusual phenomena. One of them is by tropospheric propagation through a phenomenon known as 'ducting' in the lowest level of the earth's atmosphere called troposphere which extends to a height of about 20 km at the equator. In this region, especially immediately before the monsoon season, there is a sudden rise in moisture content and changes in temperature and pressure which make it possible for very high frequency TV signals to travel long distances through the troposphere. Such conditions may also arise over sea surfaces as in the path between Bombay and Karachi.

The second explanation proposed is the occurrence of events known as 'sporadic-E' in the E-layer of the ionosphere which normally does not reflect TV signals. During a sporadic-E event, there occurs a sudden rise in the concentration of electrons in the E-layer which makes it reflect high frequency TV signals.

The third possibility is the modification of the ionosphere by high power radio waves beamed from radio transmitters. Such a possibility has been experimentally proved. In such an event, high power beams from radio transmitters have been found to increase the reflectivity of portions of the ionosphere for high frequency waves, which could enable TV signals to be received several hundred kilometres away.

B.B.

UTILITY OF MAPS

(Continued from page 64)

the retreat is gradual (see Map-4).

Vegetation

Map-4 presents an outline of the geographical distribution of vegetation in India. Compare this with Map-4 and note the correlation between the two. On the basis of rainfall, India, outside the high Himalayan region is divided into three major vegetation regions: The tropical deciduous forests and the thorn forests and scrubs.

Soil

Map-5 shows the soil distribution in India. Note the major soil belts in India. In Map-3, Map-5 and Map-6, are compared, we find that there is a definite correlation between the major physical division, different soil belts, the average annual rainfall and crop distribution.

Map-5 depicts the mean, minimum temperature in the month of May. Note

the areas which have the highest maximum temperatures. The steepest gradient of heat is in the north-west, shown by the line of increasing temperature and decreasing pressure. In north-west the temperature may go up as high as 48°C. Map-4 shows the primary crops grown in different parts of India. India has been divided into 12 cropping zones on the basis of the relative proportions of the cropped area under various crops in different parts of the country. It reflects the first ranking position of the particular crops in India favoured by the suitable combination of physical and cultural factors required for each of them. It is observed that rice is widely cultivated in almost all states of India except Rajasthan. It is mainly distributed in the great plains of north India, coastal plains, terraced valleys of low Himalayas and in irrigation pockets elsewhere.

If you refer to the previous maps, you will observe that all high productive areas coincide with areas of heavy and well dis-

tributed rainfall of over 100 cm or of extensive irrigation, temperatures remaining generally above 25°C during the season. Wheat, the second important food-grain is grown in north-west India, where the annual rainfall is 50-75 cm. One half of the wheat production comes from Punjab and UP alone. Also, UP is the sugar bowl of India. The second position in area and production of sugar is occupied by Maharashtra and the third by Bihar. The principal oil seeds grown are groundnut, sesame, rapeseed, mustard, linseed and castor seeds. Oil seeds are grown in coarse grain zones along with or in place of cotton. Cotton is the most important fibre plant of India and grows well in drier parts of the black cotton soil of the Deccan Plateau in Maharashtra, adjoining MP and Gujarat. The other important growing tracts are Punjab, Haryana and their adjoining areas in the north-west. Please note the distribution pattern of other primary crops in the map.

(To be concluded)



Coffee Break

The Anatomy Of Terrorism

Why are certain sections of society more vulnerable to the call of terrorism than others?

Because, by virtue of their education, they are able to see the limitations of a social order.

Because they are fanatical believers in a cause or a faith and are more than willing to employ violence and terror to further it.

Because they are prepared to kill and be killed in the process; because they prefer death to life.

Because participation in a terrorist movement fills them with a sense of glorious mission and gives them a romantic identity.

In a well-researched write-up, published in The Indian Express, HIRANMAY KARLEKAR analyses the rise and growth of terrorism in India and the world. Excerpts:

What sort of people become terrorists? Why do they become terrorists? What makes terrorism grow? How can one contain it? The blasts of May 10 and 11, which left 77 dead and many more wounded in Delhi, Haryana and UP and more recently the Air India crash over the Atlantic on Jun 23 in which 329 lives were lost, have lent a new urgency to these questions.

For answers, one must see the events in Punjab and the spillover violence into other states in a historical and an international perspective. Historically, these do not constitute the first outbreak of terrorism in the country. As early as the second half of the 19th century, the Wahhabis, a puritanical Islamic sect originating in West Asia and steeped in fundamentalism, had unleashed a wave of violence in India. In 1872, one of its members assassinated Lord Mayo, the Viceroy, in the Andaman Islands.

Around the turn of the century emerged revolutionary terrorism which continued (despite harsh repression which produced periods of quiescence) as a highly romantic and admired strand of the freedom movement with its own legends and pantheon of heroes. Independence was followed by the adoption of an insurrectionary line by the CPI at its second Congress in Calcutta in February-March 1948

and the intensification of the violent, peasant movements in Telengana in Andhra Pradesh and Kakkdwip in West Bengal. These were crushed before their formal withdrawal in 1951. Insurrectionary violence, involving acts of terrorism: erupted in Nagaland in the early '50s, in Mizoram in 1966, in Manipur in the late '70s, in Assam in 1979 and in Tripura in 1980. Extremists in the CPI-M emerged as a distinct stream in 1967 and formed the CPI (Marxist-Leninist) on May 1, 1969. They unleashed revolutionary violence in almost the whole of West Bengal and parts of Assam, Tripura, Bihar, Orissa, Andhra Pradesh, Tamil Nadu, Kerala, Maharashtra and Punjab before they were suppressed.

Terrorism is not a phenomenon exclusive to India. The US, Canada, almost all the Latin American countries, Ireland, Britain, France, the Federal Republic of Germany, Spain, Italy, Turkey, Lebanon, Egypt, Jordan, Israel, Burma, Thailand, Malaysia, Philippines, Indonesia and Japan have had a taste of it in the last two decades. The Symbionese Liberation Army of the US, the Front de Liberation du Quebec (Front for the Liberation of Quebec) in Canada, the Provisional IRA of Ireland, the Baader-Meinhoff group of the Federal Republic of Germany, the Red Brigades of Italy, the Palestinian guerrillas and the Arab terrorist groups such as the Black September organisation and the Red Army of Japan are familiar names.

As in India, terrorism has a long history outside. In Europe, for example, secret societies were a feature of almost the whole of the 19th century. Two of the earliest, formed in 1810 to resist Napoleon Bonaparte, were the Tugendbund (League of Virtue) of Germany and the Carobonari (charcoal burners) of Italy.

There were a number of successful and unsuccessful attempts at assassination. Napoleon III of France and the Empress escaped unhurt in 1859 when Felicio Orsini, a Piedmontese supporter of Giuseppe Mazzini who established the Young Italy movement in 1831, threw a bomb at them while they were on their way to the theatre. An attempt to kill Queen Victoria failed in 1872. Two attempts to assassinate the German Emperor produced Bismarck's anti-socialist law of 1878. Alexander II, a liberal Tsar, if there could ever be one, was assassinated in 1881; President Sadi Carnot of France in 1894; Empress Elizabeth of Austria in 1898; King Humbert of Italy in 1900; King Alexander and Queen Draga of Serbia in 1903

and King Carlos of Portugal in 1908. The assassination of the Austrian Archduke, Frantz Ferdinand, at Sarajevo, catalysed World War I.

The terrorists who formed secret societies in 19th century Europe came from the ranks of army officers, students, teachers, professionals, intellectuals, the lower clergy and small proprietors. They also included some adventurers and criminals. As for the contemporary terrorists in Europe and the two Americas, Richard Clutterbuck writes in *Living With Terrorism* that "with rare exceptions (such as the provisional IRA) they are led and predominantly recruited from university students, graduates and sons and daughters of the affluent. They make the most of the few working class recruits they do manage to attract to their ranks, and especially so when these come from the deprived or coloured communities—as, for example, in the Symbionese Lebanon Army."

Revolutionary terrorism for India's independence drew its recruits from the students, particularly those from lower middle class homes, teachers of both schools and colleges, professionals and the white collar-lower middle class, which formed a part of a wider status group. Its striking arm was almost wholly made up of students and youth.

Though they had peasant support, the communist revolutionaries who implemented the line laid down at the CPI's second Congress in 1948 were mainly white-collar persons from the upper and middle classes. Several had been educated abroad and were known for their intellectual attainments. The leadership of the insurrections in Nagaland, Mizoram, Manipur and Tripura has also come from the educated middle class elements, with the youth playing a particularly important role in Tripura and Manipur.

Naxalites in West Bengal and elsewhere included some of the best and most idealistic students from the colleges and universities as well as some of the finest youth of the country. Their leaders were mostly intellectuals with upper and middle class backgrounds; their rank and file had a lumpen and criminal fringe.

Most of the elements mentioned above are to be found among the Punjab terrorists. Shahbeg Singh, a former Major-General of the Indian Army, who was killed during Operation Bluestar, and other military personnel like Major-General Jaswant Singh Bhuller (retd.) provided the military element present in the

Jarnail Singh Bhindranwale and others like him were the counterparts of the religious functionaries involved in the Wahhabi movement in the 19th century. Leaders and office holders of the All-India Sikh Students' Federation (AISSF), the movement's striking arm, represented the student element active in almost all terrorist groups mentioned above.

Like the pre-independence terrorists in Bengal, the ones in Punjab are also attracting high school students. As in the case of secret societies of 19th century Europe and the Naxalites of the late '60s and early '70s, they have had a lumpen and criminal component with a large part of their arms and ammunition reportedly arriving through smuggling channels.

As the examples since the 19th century show, there are certain sections which are more vulnerable to the call of terrorism than others. Why is it so? By virtue of their education, army officers, students, teachers, professionals, intellectuals and religious functionaries are able to see the limitations of a social order. They are also exposed to the influence of causes and ideologies which the uneducated may not comprehend. Their cause and the belief in the inevitability of its ultimate triumph enables them to take on the existing order which others would leave well alone. Besides, they have the intellectual and organisational skills to launch such movements. The abject poor do not have these. Besides, they are generally too overawed by the world around them and too preoccupied with survival, to think of a change. The very rich fear upheavals which might cost them their fortunes.

Significantly, all revolutions in the modern age have been led by the middle class intelligentsia sometimes with the support of a section of the army—the St Petersburg Garrison during the Russian Revolution, for example.

As for the criminals, Hoffer says, "It sometimes seems that mass movements are custom made to fit the needs of the criminal—not only for the catharsis of his soul but also for the exercise of his inclinations and talents. The technique of a proselytising mass movement aims at evoking in the faithful the mood and frame of mind of the repentant criminal."

The relevance of this observation becomes clear on recalling that the terrorist represents the same human material as the person who joins a mass movement. He is a fanatical believer in a cause or a faith and employs violence and terror to further it. He is prepared to kill and be killed in the process. He subordinates his entire existence to the cause and is bitterly opposed to anything antithetical to it. Hoffer writes of mass movements in the preface to his book: "All mass movements generate in their adherents a readiness to die and a proclivity for united action. All of them, irrespective of the doctrine they preach and the programme they project, breed fanaticism, enthusiasm, fervent hope, hatred and intolerance...all of them demand blind faith and single-hearted allegiance".

What is it that turns these sections to terrorism at specific junctures? Terrorism, like mass movements, demands a readiness to die and proclaims the inevitability of the cause's final triumph. Besides, it promises the millennium and lends a new, romantic identity tinged



G.G.

with a sense of glory, to its practitioners.

People take to it when they prefer death to life. A major cause of their doing so is often a sense of humiliation or an unbearable affront to one's self-respect. A terrorist is a rebel, who "proceeds to put self-respect above everything else and proclaims that it is preferable to life itself. It becomes for him the supreme blessing. (Albert Camus in *The Rebel*)."

Equally important is frustrated aspiration, which is felt all the more acutely in a general climate of success. The resultant feeling of resentment is directed against the prevailing order even when failure is due to one's own inadequacy. Hoffer writes, "There is a tendency to locate the shaping causes of our existence outside ourselves. Success or failure is linked in our minds with the state of things around us."

"Success brings recognition. Lack of it need not mean anonymity in a closely-knit community where everyone is known, recognised, and has an assigned place in a warm inclusive web of collective life. It means anonymity in an impersonal urban society where one's neighbour is a stranger and one has no friends. Anonymity conduces to a feeling of insignificance and erodes one's sense of identity. Participation in a terrorist movement fills one with a sense of a glorious mission and gives one a romantic, esteemed identity. Not only anonymity but marginalisation also draws people to terrorism by instilling in them a sense of their insignificance and impotence which is galling because it is contrary to the thrust of human life which lies in self-affirmation and signification leading to recognition."

Poverty is another major cause. The abjectly poor, as we have seen, are not inclined to become terrorists. But poverty and injustice can deeply move sensitive people even when they are not the victims. Mahatma Gandhi, once a successful lawyer, took up the cause of India's poor masses and Harijans as no other leader before him. Frederic Engels, a prosperous mill owner, was deeply moved by the condition of the British working class and wrote a powerful tract on it.

Apart from all this, there must be a belief that the existing order is about to collapse. It is one thing to risk one's life for a millennial and realisable cause and quite another to commit suicide. According to Lenin, one of the conditions making for a revolutionary situation is the inability of the existing order to carry on as before.

The humiliation of foreign rule and domestic autocracy which rode roughshod over the sensitivities of the rising middle classes led to

the 19th century terrorism in Europe. The racial discrimination, humiliation and exploitation of the British rule led to the terrorism which formed a stream of the national struggle. The suicidal insurrectionary line was adopted at the CPI's second Congress in 1948 in the hope that it would end poverty and exploitation.

The insurrections in Nagaland, Mizoram, Manipur and Tripura were caused mainly by the humiliation inflicted on the tribals by the exploiting traders and money lenders from the plains.

The revolutionary terrorism of the Naxalites was the result of many factors. Sensitivity to poverty and criminal exploitation, impotence in the face of an economic order which frustrated their legitimate ambitions and made unemployment the lot of most Indian students and youth, and the humiliation meted out to them and others daily by all in authority including the staff and heads of educational institutions. They opted for the revolutionary doctrine of Mao Zedong, but ended up practising terrorism.

Some of the conditions making for the rise of the Naxalite movement prevail in Punjab. Though the state has the country's highest per capita income, lopsided economic development has led to inadequate expansion of opportunities (causing unemployment or unavailability of the kind of employment sought), sectors of relative deprivation, and the displacement and marginalisation of certain categories. Along with competition for water resources and territorial claims, this has also made for tension with the Centre and the neighbouring states.

What could have been no more than strong regional economism, assumed an intensely communal and terrorist character given the religious intensity of a section of Sikhs, their martial tradition, the usurious and exploitative role of Hindu money lenders and traders, the communal politics of both the Akalis and the Congress (I) and the unitarist policies of the latter which hurt state sensibilities in all parts of India.

Once terrorism emerged, it assumed its own logic and dynamics and grew almost unchecked in the initial stages, thanks to New Delhi's earlier approach bordering on the indulgent. It has, however, no future. No group in modern times has achieved its aims by terrorism alone. The modern State with its powerful machinery of surveillance and repression, is too powerful for them. Their elusiveness and invisibility are doubtless advantages. And they can continue for a long time in their violent ways. But failure to make headway with their wider cause eventually destroys what sustains them most—hope of external success. Violence, particularly of the brutal, cowardly type involved in the blasts of May 10 and 11, creates revulsion. The repressive measures that follow violence are galling even to those who sympathise with the terrorists.

Repressive measures like the Terrorist and Disruptive Activities (prevention) Bill of 1985 and the recent amendments to the Arms Act, however, need to be supplemented by the acceptance of legitimate demands. A combination of firmness and concessions has invariably defeated terrorism which remains as it has always been—a tragic, heroic and an indignant gesture doomed to futility.

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Booktalk



UNIFORMED APPROACH

The rejection rate of candidates appearing before the Services Selection Boards (SSBs) for selection to officer commission in the armed forces is quite high. One major reason for this is that most candidates are not equipped, mentally and emotionally, to face the battery of selection tests given at the SSBs, with confidence. They are generally not aware of, or have wrong notions about, what the selection boards are looking for and what the correct approach should be.

There is hardly any standard book on the subject which one could recommend to prospective candidates. However, in writing his book **A Way To Success At SSBs**,* Wing Commander A.K. Das (Retd) brings to bear on his work his field experience as a senior Group Testing Officer (G.T.O.), Interviewing Officer and Deputy President of numerous selection boards. He was also associated with the psychological Research Panel, Ministry of Defence. He is, therefore, well-qualified to treat each part of the three selection techniques employed at the SSBs to assess the candidates, namely psychological testing, G.T.O. series and the interview, with first-hand knowledge and expertise.

The first part of the book—preparation for the SSBs—caters to the needs of the candidates. The author gives a correct and clear exposition of the tasks and exercises which the candidate may expect to find at the selection board, of the leadership factors which are assessed and evaluated, and the leadership qualities that can be developed by study and training.

The author has covered the psychological part (107 pages) more comprehensively than the G.T.O. series (50 pages only). Inclusion of so many exercises relating to the intelligence tests and 'responses' to the projective tests like TAT and WAT was not really necessary or even desirable. For the tendency of an average candidate is to cram the suggested responses and reproduce them verbatim in his written attempt resulting in lack of spontaneity in his performance which is considered an important requirement by the assessing officer.

When dealing with the G.T.O. tests, the interview and the Pilot's Aptitude Battery Test (PAT), the author's exposition is brief and to the point, and he has given pertinent tips with regard to tests like Group Planning Exercises, Group Discussions and Progressive Group Tasks.

All in all, the book is useful for those appearing for the SSB tests and those who are concerned with giving guidance and coaching to such candidates.

Brig R.L. Mullick (Retd), New Delhi

A WAY TO SUCCESS AT SSBs by Wing Commander A.K. DAS: published by Soni Book Agency (India), New Delhi; pages : 301; price: Rs 45.

Stars And Careers



LEO

If you were born between Jul 22 and Aug 21, the Sun at the time of your birth occupied the sign Leo. You are extremely astute and have an inherent organising ability, faith, truthfulness, believing all to be good and pure until found to be otherwise. You are magnanimous, forgiving, self-controlled, determined, generous, impulsive, ambitious and have deep emotions. You have an attractive and sympathetic nature, unique in its power to feel and to harmonise itself with others. You are either dreadfully careless and sloppy or meticulously neat and orderly.

Leo generally gives a permanent position in life. All government services and those in government departments are preferred by Leons. It may also give an independent business financed by the father or a business taken over from him. It assures success in dealing with red or orange-coloured articles, copper, gold, wheat, medicine and chemicals. Some Leons develop good taste in art, literature and drama. They achieve resounding success in their careers and become very popular.

There are three classes of Leo individuals. Those born between Jul 21 and the end of the month are social, loving, firm and faithful, keen to love and associate with others. Those born between Aug 1 and 10 are more self-confident and self-reliant, more ambitious and assertive; they rise in life by dint of their own efforts; they are born leaders and directors. Those born between Aug 10 and 21 are more philosophical, philanthropic, and sympathetic, ardently affectionate and kind in their speech and action. They are adaptable, as also impulsive and diffusive, but always revolve around a centre of feeling in which the good of others is studied before their own welfare.

Socially, the period upto January next year is wonderful. You will be elevated to the position of a leader and will be able to build a good rapport with your superiors. Success will not come easily upto the middle of November. But from December onwards success is likely to be achieved without much effort. Till November your career may not become quite clear. From December you will be able to concentrate on career prospects and will achieve distinctive success before February 1986.

There is a strong possibility of your becoming strong-headed and impulsive between the end of July and the first week of September. Financial gains may accrue to you in the period from the second week of September to the end of October. You are likely to become more practical, courageous and enterprising from the end of October, and before February next year you can achieve your targets in career and education.

Lechman Das Madan, New Delhi

OBSERVE & DESERVE



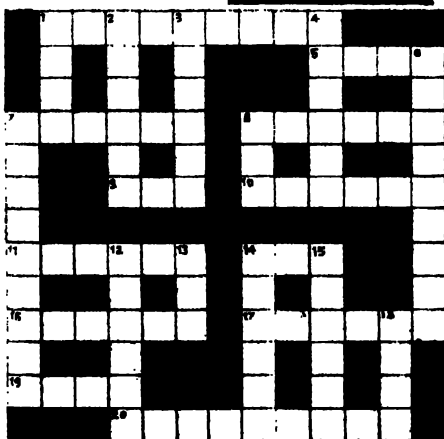
TO BE OR NOT TO BE?

You'll have to be a really keen observer to get past this one. Actually it's very simple, like all other brain teasers from Gopi Gajwani's bag of tricks. But then simplicity is what makes it a teaser and that much more fun. Don't you agree? Well, let's see. Try your luck in not more than 20 words.

Kenwords-45

BY RANIP SOMAN

WIN RUPA PAPERBACKS



ACROSS

1. A role made famous by Joyshree Arora in a popular Doordarshan serial (9).
5. A card game in which one player may play alone against others (4).
7. The writer of the famous book *A History Of Cricket* (6).
He thanks his stars that McEnroe doesn't play cricket (returns) (6).
9. Currency of Japan (returns) (3).
10. Metrical hymn set to simple tune, usually

of Germany (6).

11. English dramatist, wrote and adapted more than 100 plays, notably *Our American Cousin* (1858) which was being staged at Ford's Theatre in Washington on the night of Abraham Lincoln's attendance and assassination (6).
14. When I was a child he held out his hand, when I grew up he handed out his cash (3).
16. Asiatic mountain systems of north Tibet, extending from Pamirs into west China (6).
17. This admiral of the Indian Navy was appointed the Indian High Commissioner to New Zealand (6).
19. The 27th President of the US from 1909-1913 (4).
20. Nov 11 is celebrated as the — Day for on this day World War I came to an end in the year 1918 (9).

DOWN

1. God of ancient Phoenicians and Canaanites (4).
2. German name of Aix-la-Chapelle, ancient city of Germany, the scene of coronation of German kings till 16th century (6).
3. An odd, fanciful notion (6).
4. One of the major classical dances of India (returns) (6).
6. These twins, created by Enid Blyton, go to St Clare's School (9).
7. The most talked about part of the Golden Temple (9).
8. Trade alliance among developed countries (3).
12. A famous novel by Vladimir Nabokov (6).
13. In desperate situations, cricketers and thieves resort to this (3).
14. An open gallery at the end of the service side of a tennis court (6).
15. A festival of lights (6).
18. To cast amorous glances (4).

HOW TO ENTER

● Print the answers neatly in capital letters alongwith your name, age and address. Each crossword must be pasted/clipped to a bigger piece of paper and each apperception entry written **only** on a postcard.

● You may send in any number of entries, but each must be numbered accordingly and accompanied by its CROSSWORD/COUPON.

● Though all your entries will be included in the draw of lots, you will be entitled to only one prize—the highest in case you're getting more than one.

Closing date for the contests: August 25

Address your entries to: The Editor, Career & Competition Times, 10 Daryaganj, New Delhi-110 002.

Solutions in October.

PRIZES

KENWORDS-45:

2 First Prizes

Alistair Maclean's *San Andreas* and Salman Rushdie's *Shame* from Rupa & Co., New Delhi to the first two **all-correct** entries (or **one-error** entries if there are no all-corrects) pulled out of the hat.

Bagley's *Bahama Crisis* from Rupa & Co.

APPERCEPTION TEST-3:

10 First Prizes

An exciting package from Rupa & Co., New Delhi to the **correct** entries pulled out of the hat.

SOLUTIONS SOLU

KENWORDS-43

Across: 1. Shatila 4. Vodka 6. Zen 7. Dutch 8. Alfalfa 10. Foggia 12. Melody 15. Picasso 18. Mahdi 19. Net 20. Gauss 21. Swinton

Down: 1. Shura 2. Theta 3. Arzwal 4. Vanddyke 5. Alchemy 9. Fog 10. Fleming 11. Ictinus 13. Orc 14. Cortes 16. Argon 17. Pupin

Winners

First Prize (all-correct/one-error): 1. Rajeev Dwivedi, Lucknow. 2. Sunita Gupta, Kanpur.

Consolation Prize (one-error): 1. Anand Kumar N. Rajahmundry (Andhra Pradesh). 2. Praween Kumar Verma, New Delhi 3. Deepak Khare, Bhopal 4. Rakesh Gupta, Sunder Nagar (Himachal Pradesh). 5. Jasbir S Nischal, New Delhi.

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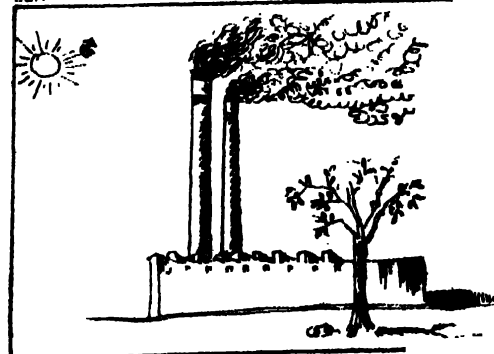
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APPERCEPTION TEST-1

The entries were just too many. The participants came up with various interpretations ranging from "fathers not coming out of burrows when the sun's out" to "the presence of trees being an unnatural phenomenon in a polluted landscape". But those who didn't "grope in the dark for long" observed correctly:

"The sun being to the left of the chimneys, the shadows of them should have been on the right hand side, that is, the side away from the sun."



The seven lucky 'deservers' are: 1. A.K. Singh, Nilokheri (Haryana) 2. Stanley Carvalho, Bangalore 3. Debashish Mittra, Lucknow 4. Rachna Yadav, Ahmedabad 5. Savitri Ratho, Cuttack 6. Hemant Kumar Das, New Delhi. 7. Tapan Kumar Nath, Kushwaha, Allahabad

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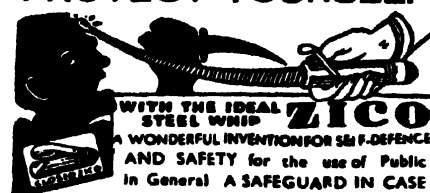
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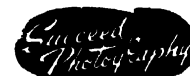
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Here's How

TO DINE

Dinners are social occasions and society demands certain norms. To help you become a party hit, some ways on how to conduct yourself at formal dinners.

When invited to dinner:

General

1. Plan to arrive at the exact time specified.
2. After a short social hour, your hostess will lead the way into the dining-room. The men should stand aside until all the ladies have followed her into the room.
3. To make for smoothness when several people eat together, each person should sit down from the left of his chair.
4. No man should sit down until all the women are seated.
5. Normally, guests begin eating when the hostess begins. But should she say "Go ahead," do so. At a large dinner party or banquet, when your immediate section has been served, you may begin eating.

Your dinner napkin

1. Unfold it halfway and place it on your lap.
2. If called away from the table or compelled to leave early, crumple it neatly and place it at the left of your plate. Leave the clean side showing.
3. If you should drop your napkin on the floor at a family dinner, pick it up and continue to use it.
4. What to do with it at the end of a meal: crumple it neatly and place it at the left of your plate just before you leave the table.

Eating technique

1. **Put small amounts of food into your mouth at a time:** You are expected to contribute to the conversation throughout the meal



2. Close your mouth when chewing your food; otherwise, the sound of chewing, as well as the sight of food being chewed, might prove disconcerting to your neighbours.
3. Swallow most of the food you have in your mouth before answering a question or making a comment.
4. Ask for things rather than reach across the table for them. Avoid helping yourself with a 'boardinghouse reach'. Even though you might have to bother your neighbours many times, it is much better to ask them to pass you things than to reach for them yourself.
5. Avoid directing a question to someone who has just put food into his mouth.
6. Avoid passing food to someone who is just lifting food to his mouth.
7. Do not rinse your mouth with water, tea or any other beverage. The ensuing noise might embarrass someone.
8. You may find that you have no time to eat because you are being asked too many questions by your host family or the other guests. You may even find that you are only halfway through your meal even though everyone is through. You can avoid this pitfall by remembering the conversational gambit of tossing the ball: **you** ask the questions, and while they are busy answering your questions or making comments, chew away, while at the same time being very attentive to

what is being said. Do not ask questions requiring a yes or a no for an answer; instead, ask questions beginning with, "Why..." "What do you think..."

9. **Elbows on the table:** This is permissible only before and after meals and between courses, **never** while you're eating.
10. If your left hand is not being used, let it lie comfortably on your lap. Do not use it to lean against the table.
11. Do not use your fingers to push food onto your fork. A knife may be used. Better yet, rice, peas, etc might well be partly squashed between the tines of your fork, then picked up.
12. After you're through eating, do not stack the dishes for your hostess (in a restaurant, for the waiter). Dishes should be removed one by one from the table.

Silverware

1. If you are lacking a piece of silver, quietly ask your hostess for the piece you need. Catch her eye and say, "May I have a teaspoon, please?"
2. Place used silver on your plate, never on the tablecloth.
3. At a sitdown dinner at home, when you are passing your plate for second helpings, place your fork and knife across the centre of the plate, the handles just over the edge of the plate, so that they are not likely to slide off.
4. When you drop unused silver on the floor, pick it up if you can do so without disturbing the person beside you - and ask for another. If you are going to have to disturb the person beside you, say, "I'm sorry" to your hostess and let it go at that; she will get you another.
5. Should you drop a utensil you are using, ask your hostess for another. Pick up the soiled piece if you can do so gracefully; otherwise, let your hostess retrieve it.

From **ORIENTATION HANDBOOK FOR VISITORS FROM ABROAD** by Sunnie F. McCabe

GREENLAND: THE BIGGEST MINI-STATE?

The European Economic Community (EEC) is about to shrink to less than half its present size, and the average Greek or German could not care less. Indeed, the average citizen of the Common Market is totally oblivious to the imminent contraction of its frontiers—which is perfectly reasonable because it won't hurt him at all.

The half of the EEC that is leaving the fold is Greenland (840,000 square miles—2.2m sq km), and the departure of only 50,000 Greenlanders will not leave the other 260m citizens of the Common Market feeling lonely. But the decision to quit the EEC is only a first step: what is happening in Greenland is a slow-motion national liberation movement. Decolonisation has finally reached the Eskimos.

Although most Greenlanders have some European blood after 250 years of Danish colonial rule, 80% of the population is still Inuit (Eskimo) in culture and language. It is the one part of the polar regions where an independent Inuit nation could ever emerge. Everywhere else, the native northern peoples have been incorporated into larger nations ruled from the south: Canada, the US (Alaska), Norway, Finland and the USSR. But though in practice other northern natives have no chance ever of achieving independence, an independent Eskimo-ruled Greenland is bound to become its focus and symbol of their aspirations.

Denmark is unhappy at the trend of events in Greenland, but it did not openly condemn the arguments which allowed the socialist Siumut (Forward) Party to win the 1979 poll on a platform of complete autonomy for Greenland except in defence and foreign affairs. Nor did the Danes stop PM Jonathan Motzfeldt's Siumut Government from holding (and winning) last year's referendum on Greenland's departure from the EEC.

Siumut won the referendum on EEC membership with the slogan "It's high time that we end government from Europe," and last month the European Commission finally faced up to reality. Brussels announced that it would open negotiations for the withdrawal of Greenland from the EEC, offering the Greenlanders generous access to European markets for their fish and minerals in return for limited European fishing rights in Greenland waters.

The logical next step is full independence from Denmark, but that cannot come at once. Not only is 18% of Greenland's budget provided by Danish aid, but the Inuit society of Greenland has been almost as devastated by its contact with whites as are the Eskimos of North America. More than 25% of Greenland's population suffers from venereal disease, and perhaps an even higher proportion from alcoholism. Only a quarter of Greenland's 800 teachers are native-born, and only one of its

doctors. The skills needed for running an independent country are all desperately scarce in Greenland, but the number of young Greenlanders who are acquiring these skills is growing rapidly.

Even the two small Marxist-Leninist parties, the Workers' Party and Inuit Ataqatigi (Inuit Brotherhood), have laid aside their demands for independence "for the moment" but it will come, probably within five or 10 years. And when the biggest mini-state in the world gains its independence, the other nations around the polar regions will have more to worry about than just its unsettling influence on their own northern native populations.

Greenland is strategically important territory to both Russians and Americans, for it sits in the middle of the ocean gap through which each side's submarines must pass to approach the other's shores. At the moment the gap bristles with NATO bases and weapons, and the Greenlanders wisely do not make a fuss about the two US bases on their territory. "The only way to build a true socialist society in this country," a leader of the Siumut Party observed cynically, "is not to bother the Americans." But the conservative opposition party, Atassut, is already making the outrageous claim that the ultimate goal of the left-wing parties is a communist Greenland. From the day it is born, an independent Greenland will be a major area of contention between the superpowers.

Gwynne Dyer, London

From The Club Desk



CCTimes Club, Coimbatore in action

Activities galore... from all accounts, CCTimes Clubs throughout the country are doing really well for themselves. Evidently, our exhortation three issues back to activate your clubs did not go unnoticed. Needless to say, we are delighted and encouraged by your enthusiastic response. At the same time, we would like to caution you against self-satisfaction and complacency. You have made commendable progress, but there is so much more to achieve. As far as your personal and collective growth is concerned, the sky is the limit. So, be on your toes always, never falling back on your heels, come winter, spring, summer or fall. Strive to be more and more active. And do keep us informed, because good communication will go a long way in making your clubs healthy and strong.

The 'Club of the Month'...choosing a club for this coveted distinction proved to be rather difficult this time, what with each of the activity reports that flooded the Club Desk showing a brilliant track record. However, that did not prevent us from making a unanimous choice—the CCTimes Club, Coimbatore, M.No C-8/10. What distinguishes it from the rest is the variety and relevance of its activities—from organising an inter-college quiz competition, a trek to the Nilgiris, a 'treasure hunt', a first aid demonstration, a symposium on 'Coping with the oil crisis', to conducting yoga and meditation classes for members and others, visiting hospitals, orphanages, homes for the aged and entertaining their inmates. It has even started a lending library, with each member donating one book to it. To beat the summer heat, it had 10 days of swimming classes; no doubt, it must have been a 'cool' experience. A photography contest is in the offing. 'Nature', 'Youth' and 'Monuments' are the suggested captions and since the club is keen on an all-India participation in its contest, we publish here its address—CCTimes Club, C/o N. Mahendran, Visweswarayya Street, Coimbatore-641025. Since the prizes are attractive and the last date for entries, which is Aug 5, is fast approaching, you would do well to hurry. By the way, CCTimes Club, Coimbatore, thanks a lot for the photograph.

Close on the heels of the 'Club of the Month' is CCTimes Club (Arun Kumar Bose), Calcutta. Its activities have attracted the attention of a widely read local Bengali fortnightly which is going to carry a report on it in its very next issue. Congratulations! We are also very pleased to know that one of its members secured the 21st position in the West Bengal Civil Services Exam. Congratulations again! A quiz contest, a debate, a seminar and an essay competition have been its major preoccupations. We hope that this club will maintain its tempo and never allow the flow of its enthusiasm to cease.

We would also like to specially mention CCTimes Club, Digapahandi (Orissa) and a CCTimes Club from REC, Durgapur for making an active beginning. We hope that in the months and years to come, they will blaze a trail of success and help many youngsters to become capable individuals, at home, in society and at their places of work or study.

There has been a flow of requests for information regarding the setting up of CCTimes Clubs. For the benefit of J.Y. Rao from Akola (Maharashtra), Anuj Kr Gupta, Moradabad, Vivek Patil, Bombay, V. Prabhakara Reddy, Guntur, Shailendra Singh, Gwalior and C.P. Gadi, Fatehpur, please refer back to our March '85 issue for details.

We have made many suggestions in the past about how you can make your clubs more progressive and dynamic. This time, we recommend travel and study of India's art and culture. In fact, the two go hand in hand. And it cannot be denied that they are an imperative necessity for any Indian who wishes to widen his horizons and develop his personality and character. Many youngsters today are keen to see what lies beyond the exams and they are exerting themselves no end to go abroad. Our only advice to them: please see your own country first, learn to appreciate what it has to offer in terms of knowledge and culture, feel genuine pride about being an Indian, and then go abroad. And it is on this note that we would like to conclude.

THE LETTER 'J'

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THE LETTER 'K'

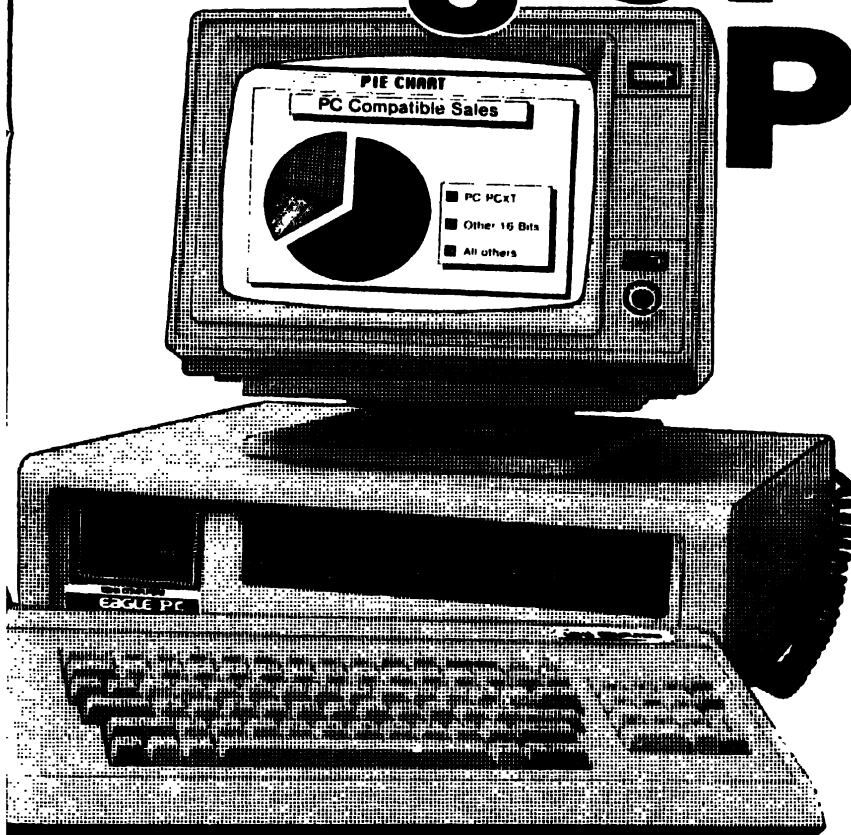
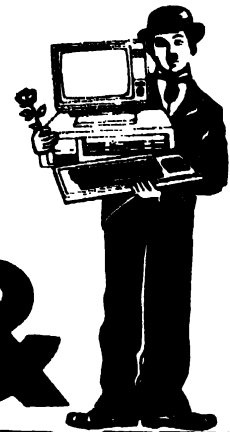
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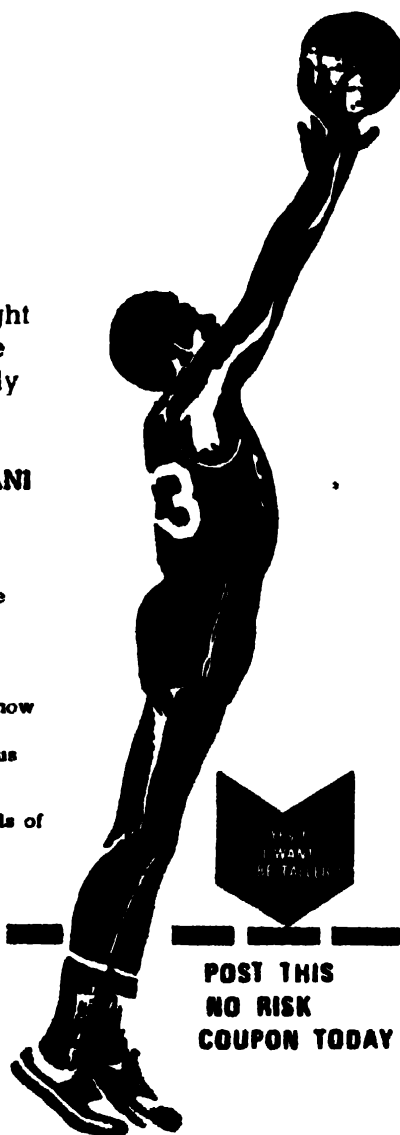
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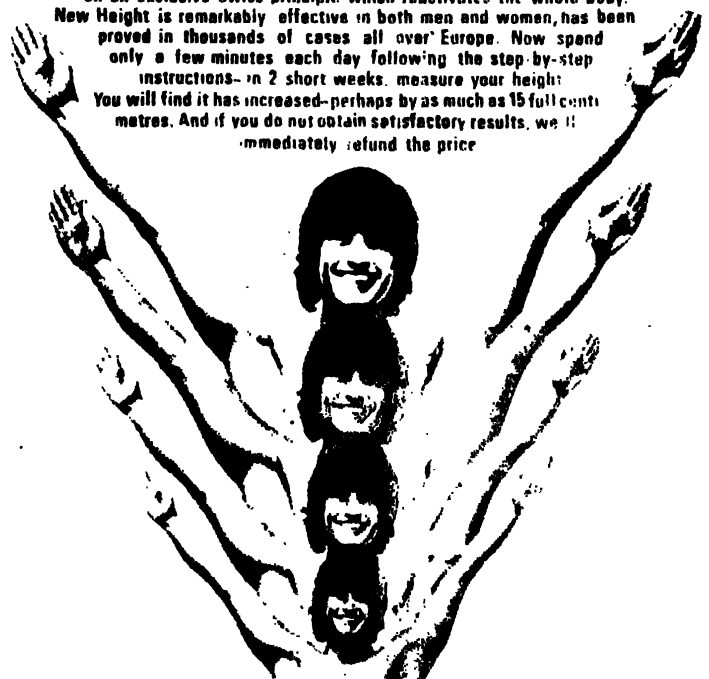
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SEPTEMBER 1985 VOLUME 5 NO. 9

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LETTERS

A Matter Of Religion

My friend, a Christian, took up to be good. He was a good man, a good friend, and he a Sikh. *Vishwadeep Bajaj, Gwalior*

Best Letter: Rs 40

Higher Education—Of What Use

Higher education in India is the plant which produces the weeds of the world. *B K Bhinde, Ahmedabad*

Prize-winning Letter: Rs 25

Education—A Farce?

In article *Higher Education: Some View points* (July '85) you are very knowledgeable. That hardly a few have benefited by the education they received in India speaks volumes for its incapacity to render useful knowledge to its worker.

Education does not mean obtaining what is written in text books, it means acquiring the ability to initiate, learn and support with security. Unfortunately, in India, education is used only to test one's memory. *Yogesh Kalra, New Delhi*

And to be honest, just you are illiterate, for both are unrelated. No human being can ever violate something as delicate as education, unless it is not the concern of your mind a day and a proper place to live. *Ali Akbar Tehrali, Madras*

Pause Please!

Exposure with a little more can be used as bouquet in your career. *(Hello Folks, July '85)* Many people have asked me why without giving even a moment's thought to the meaning.

Samarendranath Mohapatra, Bhubaneswar

Pats On The Back

My heartfelt congratulations to *CCTimes* on my success in the National Institute Academy Exam, 1984. The secret of my success is regular reading of your Practice Tests and English features.

Manoj Kumar Singh, Patna

At the instance of my success in the State Bank of India Probationary Officers Exam, 1984-85, I cannot forget to thank you for the feature *Test Of Reasoning* which enabled me to achieve the goal.

Kamalraj Johnson, Madurai

Leading Women

In *You Ask, We Answer* (July '85), apart from Margaret Thatcher our more women are at the helm of national affairs. Vigdis Finnbogadottir, the President of Iceland.

Sources: *Statesman Year Book 1984; International 'Who's Who'* and *Keesing's Contemporary Archives 1984*.

Aliens In Assam

With reference to the letter *Where's The Indian* (July '85) we the Assamese are agitating only against the foreigners. Our movement is not against the Indians since we are also Indians. Assam is for both the Assamese and non-Assamese Indians.

Ghenashyam Goswami, Gauhati

Year Of Unrest

The Year Of Youth (1985) is the year of participation, development and peace. But all around there are lockouts, bandhs and strikes.

L. Shridhar, Bhilai

Five-day Week

The new five-day week can be counterproductive for a developing country like ours. It will only enhance the already prevalent laziness in our people. Regular and steady innovation is the need of the hour.

F. Ramakrishnan, Bombay

Violent End

I was extremely sorry to learn about the death of the young MP, Lalit Maken, after reading about him in *A Politician's Progress* (Aug '85). The progress of a young, energetic and promising politician had to be cut short by the growing cult of violence.

K. Phani Raju Rao, Anantapur (A.P.)

Even after I was reading about Lalit Maken in *CCTimes*, the shocking news of his murder came in. I was shocked to know that the young and progressive politician was no longer amongst us.

S.G. Nanda, Nanded

A TRIBUTE

The brutal day-light murder of the young dynamic Congress(I) MP Lalit Maken, along with his wife Geetanjali Maken, and an unemployed youth was yet another despicable act of terrorism. And although *CCTimes* had conducted an exclusive interview with him about a month back, it was published only in our August issue—sadly coinciding with Maken's untimely demise. In this context *CCTimes* is one of the last magazines to have carried an article on Maken.

Ways Of The Government

If we analyse the causes behind the present political mess in the country, two factors are evident—firstly, the lust for political power and secondly, the tendency of our government to procrastinate and allow situations to worsen till they become dangerous for the country. If our leaders continue to pursue the present policy (of divide and rule) then the day is not far when India will become another Lebanon.

Harish Jaitak, New Delhi

Faulty Planning

With reference to *Planning In India* (July '85) the health service facilities no doubt exist all over the country. But they are neither trustworthy nor efficient. There is a complete lack of professional management skills in the administration of hospitals and health centres.

Ramesh P. Gurbani, Jaipur

No doubt, we had a record harvest of 140m ton-

nes of foodgrains this year. But they have not been stored properly. Why do we not care to improve the basic infrastructure before setting high targets? We ought to learn to coordinate our economic development, and plan at the grassroot level.

Neeraj Hatekar, Wai (Maharashtra)

Mahatma Vs Gandhi

Mahatma Gandhi dreamt of a self-sustained growth of employment with the help of the *charkha*. Rajiv Gandhi today thinks of a restrained growth of the nation by introducing computers.

Saroj Kumar Mishra, Mayurbhanj

Irony In Our History

How ironical that we won freedom with the help of non-violence and are functioning in a democracy with violence.

Vijay Kumar Soni, Baikunthpur (MP)

Code For The Transnationals?

David Colman in his book says, "the relationship which has emerged in many LDCs between the local power elite and both transnational corporations and major aid-giving bodies, has often led to projects and actions which have not seemed to be in the best interests of development in the broader sense."

In this context our PM Rajiv Gandhi's call for framing a code of conduct for the transnational corporations (in his recent address to the L.O.) is both timely and imperative. Economic cooperation among developing and socialist countries of the world proves beneficial to the former.

K. Devindra Singh, Nasik

Delightful Forecasts

Thanks for introducing *Stars And Careers* (July '85) I was delighted to read the forecast for 'Cancer' which tallied with circumstances in my own life, I being a Cancerian.

A.K. Singh, Nilokheri

Ominous Dates

Certain dates in Indian history appear to be ominous. Five years ago on Jun 23 Sanjay Gandhi, the young and dynamic leader lost his life in a plane crash.

Again it was on this sinister day this year, that the ill-fated Bombay bound Air-India Jumbo jet, Kanishka, with 329 people aboard plunged into the Atlantic Ocean.

Ghazali Imam, Distt. Munghyr (Bihar)

Kanishka Tragedy

Nothing is cheaper today than human lives.

Manas Ranjan Ghosh, Baripada

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Your letters should be legibly written/typed, not exceed 200 words and include your full name and address. We may edit them for purposes of clarity or space.

Hello folks...



Rosa Parks, 45, a black lady entered the bus and moved towards the rear to occupy a seat. A few whites were sitting there and they refused to vacate the seat for her. She went up and occupied a front seat. Soon she was approached and asked to get off the seat as only the whites could sit in the front. She refused to get up as she was tired and the rear seats were occupied by whites who did not vacate them. She was taken to the police station for breaking the state law. This happened in Montgomery, Alabama (USA).

The word spread and the blacks all over Alabama boycotted the buses. A car pool system was started and those who had cars ensured that their black brethren did not suffer. Blacks preferred to walk miles rather than use buses. This gave rise to the civil rights movement and Martin Luther King, who emerged as its powerful leader, succeeded in getting civil rights for the blacks.

The story establishes that the consumer is sovereign and even the weakest sections of society, if united, can break the most powerful system. The American whites are

the strongest group, probably in the world, and the blacks (hardly 10% of the US population) are the poorest in the US. They brought the whites to their knees because the bus system was sustained by the blacks.

Unfortunately, in India the consumer is not taken seriously and does not exert much influence on the quality and quantity of production. Two factors have weakened the Indian consumer. One, we have a predominantly seller's market where the producer is assured of his product much before the production starts. Since the producer does not have to make much of an effort in selling the commodity and the buyers vie with one another to get it, the producer does not bother to improve the quality of his product or reduce its cost of production. So quality remains low and the price high. Once accustomed to it, he does not want the situation to change. So he uses all methods, ethical or unethical, to maintain the seller's market.

Second, the consumer is neither alert nor insists on his rights. The Indian consumer cannot believe that a consumer can afford to protest. He is so afraid of losing the favour of the seller that he accepts whatever is offered to him. In such a situation those who protest, a miniscule group, are not heard. In fact, they are insulted. Also we have developed an environment in which a protesting consumer does not get the support of other consumers. You go to a shop with a defective piece and argue with the shopkeeper. The buyers around you will not say a word, much less support you.

This must change and, fortunately, some positive signs have begun to appear on the horizon. The consumers, particularly in cities, have started demanding their rights. Thanks to a few Doordarshan serials like *Rajani* and *Janwani*. In the former the dedicated, determined and dogged fighting by a lone girl is changing the attitudes of the masses and instances of consumer resistance are coming to light. *Janwani* is providing further strength to those who want to protest.

To be effective, a consumer has to

realise that he is the real bread and butter of the producer. If he does not buy the commodity the seller cannot sell it and if the seller cannot sell it the manufacturer would not make it. There have been instances where consumers have forced the manufacturer to change the product. This happened recently in the US. When Coca Cola wanted to change the formula of its popular drink the consumers protested by not buying the new drink, which forced the company to revert to the old one.

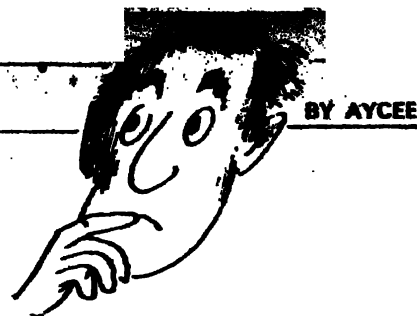
The consumers and the youth in particular should realise that if they are spending money they must get their money's worth in return. This can be done by:

- Taking the product to the seller and demanding return or replacement
- Writing to the manufacturer and insisting that the loss be made good
- Taking legal action against the manufacturer if the product has done any damage to the person
- Writing letters to government agencies and consumer organisations giving details about the wrong product
- Switching over to the other brand or altogether stopping the use of the commodity for a certain period of time.

The consumer is a great force and the real cause of prosperity of the country. The manufacturer merely produces the commodity. Prosperity comes only when it is sold in the market. Unsold commodity makes the manufacturer bankrupt. This happened during the Great Depression in the early '30s when tens of thousands of companies were closed down all over the world and thousands committed suicide. In developed countries, the consumer is aware of his strength and, therefore, he is powerful. In India also the consumer should make his presence felt and demand his money's worth.

R. Thakur.

TEST YOUR WORD POWER



The per-fect WORD. Is it on the tip of your tongue or is it hidden in the back of your mind? Either way, we agree, it's an eloquent problem.

And so each month we bring you this column, tailor-made to suit your requirements. Twenty new words complete with their meanings and usage.

But what's so unique about our word power exercise? The 20 sentences are information-packed and fact-laden—facts which are often not easily available. A weighty two-in-one package, wouldn't you agree?

Tick the word or phrase you believe is *nearest in meaning* to the key word

- 1 **barren**: A: uncultivated B: uncouth C: uncultured D: unfruitful
- 2 **berth**: A: to bring forth a child B: provide with a place to dock C: movable wooden stand D: surround
- 3 **coeval**: A: equally wicked B: contemporary C: equally eternal with another D: happening together
- 4 **confluence**: A: combination of events B: method of arrangement C: mixture of a number of things D: place where two rivers unite
- 5 **debacle**: A: weakness B: shortage C: set-back D: disaster
- 6 **ebullient**: A: rock-like B: peculiar C: high-spirited D: sweet-tempered
- 7 **expatriate**: A: person visiting another country B: person who leaves his country for political reasons C: person who no more supports his country D: person living outside his own country
- 8 **filthy**: A: resentful B: intense C: disgustingly dirty D: tiresome
- 9 **gimmick**: A: an ingenious device B: talent C: supposition D: small tool
- 10 **insurgent**: A: betrayer B: dissenter C: freedom-fighter D: rebel
- 11 **lobby**: A: to influence the members of a law-making body B: actively participate C: supply a place to sleep in D: solicit votes
- 12 **mayhem**: A: state of bewilderment B: threat C: distress signal D: any situation of violence
- 13 **obliterate**: A: to destroy utterly B: block up C: harass constantly D: punish for a wrong-doing or commit an offence
- 14 **pendant**: A: pleasant excitement B: liking C: piece of jewellery D: disposition
- 15 **pliant**: A: friendly B: calm C: soft D: easily bent
- 16 **putrid**: A: fresh B: ill-smelling C: poisonous D: impure
- 17 **rugged**: A: healthy B: rocky C: earthy D: crude
- 18 **tenet**: A: form of worship B: principle C: lecture D: one who pays rent for the use of a building
- 19 **tenure**: A: quality of life B: stretch of land C: period of holding office D: short period of time
- 20 **tranquil**: A: gentle B: peaceful C: excellent D: sleep-inducing

(Answers on page 62)

THOUGHTS

Here's some food for thought ... provided you pause to ponder over it. These passing thoughts on various social, political and economic issues, expressed by a few observant minds, often portray the bare realities of life. They may even set your thought processes in motion!

The TV, more than any other single force, has nominated and elected Rajiv Gandhi, established his authority, and will keep him in power barring an act of God or a blatant, though unlikely, misuse of power.

Iqbal Masud in *Indian Express*

It's (Britain) expensive, the drinks are too small that they do not reach the back of your throat before evaporating, the weather forecasts are useless, and all Londoners are infested with the it-can't-be-done bug. The bug makes all Londoners tell all Americans that everything they want is sold out, not on the menu, not available, gone home, not due until next week, against the law, or never heard of it.

Indian Express

Playing billiards has a striking similarity with the game of politics. As in billiards, a player has to use one ball to hit another to derive advantage, in politics one is used against another to stay in the driver's seat.

PM Rajiv Gandhi

Nearly 40 years after independence we have not learned how to resolve differences across a table.

The Sunday Observer

Another factor which facilitated the accord between Rajiv Gandhi and Sant Longowal was that the Opposition was kept out of the talks.

The Telegraph

The "examination hell" certainly turns out students able to translate the written word, to parse a page of Shakespeare, but incapable of putting a spoken sentence together.

Far Eastern Economic Review on the standard of

English language in Japan

Bombay is the only city where leaders who should know better are trying to solve their problems by rousing parochial passions. They should know that appeals to local pride can be dangerously ineffective. If Mumbai sneezes today other cities will go down with cold tomorrow.

Khushwant Singh in *Sunday*

QUOTABLE QUOTES

Time: That which man is always trying to kill, but which ends in killing him.

Herbert Spencer

Bad men live to eat and drink whereas good men eat and drink in order to live.

Socrates

I've made it a rule never to drink by daylight and never to refuse a drink after dark.

H.L. Mencken

A woman will always sacrifice herself if you give her the opportunity. It is her favourite form of self-indulgence.

W. Somerset Maugham

When I am dead and opened, you shall find 'Calais' lying in my heart.

Mary Tudor

Genius does what it must, and Talent does what it can.

Owen Meredith

Who rises from prayer a better man, his prayer is answered.

George Meredith

Where more is meant than meets the ear.

John Milton

One should examine oneself for a very long time before thinking of condemning others.

Moliere

The continuous labour of your life is to build the house of death.

Michel De Montaigne

Liberty is the right to do everything which the laws allow.

Montesquieu

A man travels the world over in search of what he needs and returns home to find it.

George Moore

Soldiers, consider that from the summit of these pyramids, forty centuries look down upon you. (Speech before the Battle of the Pyramids, 1798)

Napoleon Bonaparte

The masters have been abolished; the mortality of the common man has triumphed.

Friedrich Nietzsche

The creatures outside looked from pig to man, and from man to pig, and from pig to man again; but already it was impossible to say which was which.

George Orwell

The sublime and the ridiculous are often so nearly related that it is difficult to class them separately. One step above the sublime makes the ridiculous; and one step above the ridiculous makes the sublime again.

Thomas Paine

A CULTURE UNVEILED

BY PRABHA GOPAL

"People need a story to dress by, and this year it's India."



Malavika Sarukkai: Sculptured pose.

The land of mysticism and snake charmers. This obscure vision of India has clouded the radiance of her vibrant cultural ethos.

Not many are aware of India's significant contribution to the world of art, architecture, music, dance and literature—the Mahabharata with its 9,000 couplets being the longest single epic poem in the world.

Very few have known the dynamism of this 5,000-year-old civilisation which gave the world the zero—the very basis of today's computer culture.

Many are yet to delve into India's deep-rooted culture which has stood the test of time, is resilient and has moulded the country to become one of the 10 top industrial powers in the world.

Not to be blamed, for India has never made a successful attempt to lift her cultural veil. This year India decided to reveal her true identity to the world at large. Sporting the best of her cultural fabrics and decked in the most intricate of her traditional jewels, she attempted to dance her way into the hearts of the Western

milieu swaying to the tune of Indian music. The results were spectacular and were displayed through a veritable tangle of events at the Festival of India in France and the US.

Dedicated to the memory of late Mrs. Indira Gandhi, whose creation it was, the Festival of India (1985-86) is an exposition par excellence which promises to create a deeper understanding of India's traditional skills and contemporary life patterns. The rich panorama of exhibitions, music concerts, dance recitals, cinema and theatre, seminars, symposia, workshops and lectures will attempt to bridge the existing cultural gap between India and the world. In the words of Pupu Jayakar, the chairperson of the festival: "For the first time we are facing the West in complete equality. Our generation, the older generation is passing away. This festival is about how the young eyes of India see tradition."

Rendezvous A Paris

The Mela

The unprecedented year-long *Annee de L'Inde* (The Year of India), as the festival is known in France, came alive on June 1 in all its colourful gaiety with the inauguration of a *mela* on the embankments of Seine, in Paris, by PM Rajiv Gandhi. Richly caparisoned elephants and camels ambled along the *mela* site around the Eiffel Tower; Indian music wafted across the area while the aroma of Indian cuisine captured the hearts of 1,00,000 visitors who came to share the festive joy of an India in Paris.

The heart of Paris, from the Eiffel Tower to the one-and-a-half kilometres, known as Trocadero, throbbed with the pulse of India. The area was draped with 100m-long, French and Indian flags. Imaginative welcome arches designed by Indian craftsmen with pith and bamboo, dried grass and embroidered cloth, adorned the Lena Bridge to welcome the visitors to the *mela*. And the true spirit of a 'cultural *sangam*' came to the fore as Rajiv handed over a jar of Ganges water to the French President, Francois Mitterrand. The water was later poured into the River Seine symbolising the meeting of the world's two greatest civilisations. Rajiv also presented a baby elephant to the French President (signifying the invocation of Lord Ganesha, the elephant God, at the start of a major



Kelucharan Mohapatra: Enriching Odissi.

event) following which the *mela* was declared open.

All the essential elements of an Indian *mela* were recreated. Soundscapes recaptured the noises familiar to the Indian ear: the babel of its regional languages, the cry of street vendors, the full-throated cry of the peacock rejoicing in the monsoon, and the splashing of water being drawn from a well. About 30 shops, including 18 foodstalls, selling Indian artefacts, handicrafts, toys and posters from Shivakashi were thrown open to the visitors.

Items typically found at an Indian *mela*, viz. kites, bangles, rings, headwork, traditional cosmetics, sandalwood, wooden and stone objects were on display. A variety of food and snacks from *doses* to sugarcane juice to *kababs* and sweets, representing the authentic taste and flavours of every day India—were being instantly prepared and served in terracotta vessels and in plates and cups made of dried leaves.

Performing Arts

Whereas the earlier festivals in London and New York were entirely exhibition-oriented, the French festival lays stress on



both rural and urban performing arts. The French elite has always had a deeper and more comprehensive knowledge of Indian classical and folk culture than that of any other Western country. Not surprisingly the largest section of the festival constitutes a variety of Indian dance and music—both folk and classical.

Non-classical Arts

The inaugural two-day *mela* featured more than 200 jugglers, puppeteers, dancers, musicians, and folk artistes who simultaneously performed on the sprawling *mela* ground.

The Maison Des Cultures Du Monde, House of World Culture Paris has drawn up an attractive programme of non-classical performing arts spread over the entire festival period. The programmes commenced with the lilting sounds of a percussion concert on Jun 9 and 10 followed by a Pandavani performance from Jun 10-20. Pandavani is a narrative art form of MP where the artiste narrates a story singing, dancing and miming accompanied by musicians. Lee Jau Bai, the most famous of the living Pandavani artistes, was chosen for the festival to introduce the glory of the Mahabharata to the audience. Also included were Naga dances and songs, presented by the Zaliangrong tribe and the Sema of Nagaland in north-east India.

Puppets and shadow theatre, the more popular of Indian folk art, will be presented in mid-November. Besides, Yakshagana, Kathputli and Chhatacothli, the Tolu Bomalatta from Andhra Pradesh will be presented. Tolu Bomalatta is an ancient form of shadow puppetry portrayed on a huge screen. The puppets will narrate the epic story of Mahabharata and Ramayana, to the accompaniment of music.

A display of Chhau and martial arts at the **Theatre de la Ville**, Paris, will include Chhau dances from Mayurbhanj (Orissa), Purulia (Bengal) and Seraikella (Bihar) as well as the martial art of Kalaripayattu

Panchavadyam: Attuned to the beat of 'five instruments'—three drums, a horn and cymbals.

(Kerala)

The festival will ring in the new year, 1986, with Bauls from Bengal and folk songs of Chhakri and Bhakha singers. Chhakri is the most popular form of music in Kashmir. A young man, disguised as a woman sings as he dances. Bhakha is a chorus sung by both men and women.

Ras Lila, a ritual dance based on Lord Krishna usually performed in the premises of Indian temples, epic songs and ballads (Maharashtra), Mando (Goa) songs and the desert songs of Rajasthan sung by Langas, the Mangavars and the Nurs will add up to make the festival lively and informative.

The festival will conclude with the better known performing art of India—Kathakali by the Kerala Kalamandalam.

Classical Arts

Avignon Festival: The pride of

southern France, the Avignon Festival is one of the most prestigious annual festivals of theatre, dance and music in France. This year the festival has given due weightage to the Year of India. The programmes commenced in July with a rich variety of 12 music concerts, in open air, ranging from Hindustani to Carnatic styles, with vocal recitals by Kumar Gandharva, Balamurali Krishna and Fahimuddin Dagar and instrumental recitals by N. Ramani (flute), Ram Narayan (sarangi) and Dr L. Subramaniam (violin).

Drawing packed houses is Peter Brook's Mahabharata staged in three parts—the game of dice, the exile in the forest and the war—of three hours each, at Avignon. The theatre adaptation in French is by Jean-Claude Carriere. Mahabharata is the world's largest literary work running to some 12,000 pages (about 15 times the length of the Bible) and is also the oldest book of mankind. The fulcrum of this epic is the Bhagavad Gita—the sacred book of the Hindus.

Written in Sanskrit, the Mahabharata is the source of Indian myths, religion, history and thought. This incomparable work is believed to have been composed during a time span of over a 1,000 years and it assumed a definitive form only in 4 A.D. The Mahabharata has its relevance in the present day world in its portrayal of the quarrel between two groups of first cousins, the Pandavas and the Kauravas, leading to a war. It signifies that we live in times of destruction and the prime need of the hour is to avoid a conflagration.

Autumn Festival: Indian classical styles will again be in the limelight in the Autumn Festival held in the French capital since 1972. All the major music and dance forms—over 67 events—will be presented in Paris and in other cities in

THE FRENCH RIVEIRA

The Seine: Paris stands as if risen from a river, and married to the Seine. The river has protected the city and brought it affluence. The Seine, once wild, now tamed, flows through the historic part of Paris. If one could choose only a single long itinerary through the French capital, it's along the Seine that one should go. The Seine is also a waterway, frequented by vessels other than barges.

The Trocadero: The great **Place du Trocadero**—ringed with cafes, guarded by a terraced cemetery, and affording a fine view of the Eiffel Tower bears the name of a small Andalusian fort captured by the Duke of Angoulême during a military expedition in 1823.

The Eiffel Tower: This is the "sign of beloved Paris and a sign beloved of Paris", the "bejewelled of the clouds" immortalised

by Apollinaire's verse, the delight of poets and tourists alike. It stretches up just over 1,000 ft—1,600 ft, if you throw in the television emitter stuck way up on the top. It is not the world's highest antenna—the US record is 1,970 ft and in Moscow it's 1,750 ft—but it's got to be the only one whose supporting framework hails from the 19th century! It's also the only one that's swarmed over each year by millions of visitors whose only exertion consists in having to queue up in front of the elevators (there aren't many takers for the 1,800-step stairway hike). The Eiffel Tower (**Tour Eiffel**) forms a cosy cosmos all of its own, a sort of vertical sailing ship complete with bars, shops, restaurants, a post office with its own distinctive cancellation stamp...and a weather bureau laboratory.

Year of India by French experts, who came to India regularly over the last few years, reflects their discriminating interest in India. New dancers like Malavika Sarukkai (Bharata Natyam), Kelucharan Mohapatra (Odissi), Kshemavati (Mohiniattam) Vedantam Satyanarayana (Kuchipudi) and Birju Maharaj (Kathak) were on the list of classical dancers who performed at this festival.

The classical music programmes featured lesser known artistes along with Hindustani and Carnatic heavyweights. Bhimsen Joshi (Hindustani vocal) Vijay Raghav Rao (flute), Amjad Ali Khan (sarod), D.K. Pattammal and D.K. Jayaraman (Carnatic vocal) Shivkumar Sharma (santur), K.J. Yesudas (Carnatic vocal), Parveen Sultana (Hindustani vocal), Thiruviza R. Jayashankar (nadaswaram), Bismillah Khan (shehnai), N. Rajam (violin), Budhatiya Mukherjee (sitar), E. Gayatri (veena), U. Srinivas (mandolin), Ravikiran (gottuvadyam) Zia Mohinuddin Dagar (rudra, veena), etc.

Besides this veritable fare of live performances, the French festival will also feature exhibitions of Indian art, films, architecture, textiles, hairstyles, miniature paintings—the number of artistic skills that go to make up the Indian cultural heritage. There are also forums for cultural exchange of ideas and opinions through seminars and conferences on poetry, literature, urban development and industrial and economic cooperation.

East Meets West

The Inaugural

Unlike the Festival of India in France, which is a government-to-government affair, with a pronounced emphasis on the performing arts, the US Festival is the creation of institutions and business houses to expose the skills and talents of some of India's finest artistes and craftsmen. Shepherded by members of various committees comprising luminaries like Jacqueline Kennedy, Zubin Mehta, Senator Pat Moynihan, Aditya Birla, Sanjay Dalmia, Girish Karnad and architect Charles Correa, the US Festival has the patronage of Nancy Reagan and Rajiv Gandhi. President Ronald Reagan personally dedicated the Year of India to the memory of Indira Gandhi.

Commencing with a symposium on 'India 2000: The Next Fifteen Years' as early as February 1985, the festival, for the next 18 months will course through the social cultural academic and intellectual life of 80 American cities. The formal inauguration of the festival by the Prime Minister, on Jun 13, at Washington's Kennedy Centre was, in a way, a tribute to the resounding music world of India.

The inaugural concert which presented



Bronze Charioteer, Maharashtra.

the splendid dialogue of two stringed instruments—Ravi Shankar's sitar and Ali Akbar Khan's sarod—was applauded by a full house of 2,000. The maestros *jugalbandi* (duet) was accompanied by Allah Rakha and Zakir Hussain on the tabla. The music concert had its grand finale in the crescendo of two Kathakali dancers—Kalamandalam Krishnan Nair and Kalamandalam Ramankutti Nair. Kathakali is one of the most developed and sophisticated of Indian dance-dramas. Its themes are usually drawn from the Ramayana or the Mahabharata.

Visual Arts

Sculpture

The exposition The Sculpture Of India:

2500 B.C.-1300 A.D. at the National Gallery of Art, bears testimony to the magnificence of the country's rich heritage. And, according to Indian canons, the highest expression of visual art form is through *Chitra* (drawing) or sculpture.

Indian sculpture is designed to comprehend the world of plant, animal or human life. The art pieces on display at Sculpture Of India are mainly in stone and bronze and represent the rich diversity in style and form that flourished in ancient India.

The intimate relationship between sculpture and architectural forms in the world has been exemplified by including among the exhibits, a few miniature temples and *stupas*, architectural fragments and ornamental sculpture. Some of the

US CULTURAL TREASURES

John F. Kennedy Centre for the Performing Arts, Washington: Officially opened on Sep 8, 1971 with the premiere of Leonard Bernstein's Mass in the Opera House as the National cultural centre. Designated as a memorial to the late President, the Kennedy Centre presents classical and contemporary music, opera, drama, dance and poetry from the US and other countries. Comprises three magnificent theatres: the Opera House with 2,200 seats, the Eisenhower Theatre with 1,100 seats and the Concert Hall with 2,750 seats. The building, 630 ft long and 300 ft wide, is faced with carrara marble.

The Smithsonian Institution: An independent establishment dedicated to the spread of knowledge. It is a great complex of museums and art galleries, scholars, experts etc. Devoted to public education, basic research, and national service in the arts, sciences and history, with major facilities in Washington, other US cities and overseas. A number of research centres operating under it offer massive facilities and vast intellectual resources for research and education

National Museum of Natural History, New York: One of the world's greatest centres for the study of man and his natural surroundings — in terms of both collections and programmes of research on plants, animals rocks and minerals, fossil organisms and man himself. The items exhibited represent only 10% of the collections totalling more than 55m specimens of plants, animals, minerals and artefacts that are stored in laboratories and offices in the building where over 100 scientists are engaged in research

National Gallery of Art: Maintains a permanent exhibition of masterworks by European and American artists and presents a continuing series of temporary exhibitions.

The Metropolitan Museum of Art: A store house of one of the best and most representative collections of American art. Opened in 1924 it incorporates major examples of American paintings, sculpture and decorative arts. Has extensive collection of the arts of China and Japan, and very recently is improving its holdings of Indian and South-East Asian art.

THE INDO-US HANDSHAKE

A black-tie-suit-event, the inaugural concert, was more of an elite affair," remarked Avinash Pasricha, Photo Editor, *Span*, who visited the Festival of India in the US in June this year. "Many who went to the Kennedy Centre (the concert venue) did so either to see Rajiv Gandhi or to hear Ravi Shankar," he opined.

Apparently even an overdose of culture can go undigested. The audience at the concert having had their fill with the sitar-sarod *jugalbandi* by Ravi Shankar and Allah Rakha, had no appetite left for the final Kathakali performance by the Kerala Kalamandalam troupe. "The audience response to Kathakali was poor; it should not have been combined with a music performance," Pasricha reiterated.

Among the few events he witnessed, Pasricha rated Rajeev Sethi's 'Aditi' as the "most exuberant and absorbing" part of the US festival. "The audience response to 'Aditi' was remarkable since the artefacts on display were also being designed by our craftsmen, working alongside in the exhibition," he said. "It was like walking through India transplanted live in the US." The rhythm of the Rajasthani street performers, the audacity of the women rope walkers, even the amazing world of our roadside photographers came alive at 'Aditi'.

"But, except for Rajiv Gandhi's presence, the festival by itself did not have the kind of impact expected by us here," Pasricha emphasised. The much talked about sculptures exhibited at the National Art Gallery were "mere additions to the wide variety already on display," he added.

Despite the unprecedented media attention to the festival (*The Washington Post*, *The New York Times*, *The Washington Times*, *USA Today* and a variety of American magazines have given considerable space to Indian art, fashion, etc), "the common man was not to be seen rushing to the festival unless he had been motivated by word-of-mouth".

Talking about its long-range benefits, Pasricha was optimistic that the festival would create enough interest that may lead to economic and foreign policy benefits for India. "It may also help in changing the existing prejudices against India—the result of Mrs Gandhi's assassination, the Bhopal tragedy and the army action in the Golden Temple complex," Pasricha exemplified. "The Americans were enthusiastic to know the truth behind the Punjab tangle."

The festival is nevertheless likely to have immediate benefits for India in the areas of tourism, books, films and trade besides strengthening Indo-US ties.



Nataraj—Dancing Shiva (C. 11th century)

exquisite pieces include the Didarganj Yakshi (goddess of fertility) in sandstone belonging to the 3rd century B.C., a grinning dwarf Yaksha, in stone, from the 2nd century B.C. (one of the rare pieces in Indian art that conveys a definite emotion); a miniature bronze charioteer (c. 1600 B.C.) in the old wax technique, made from the original in wood, and a standing Buddha in bronze from the 6th century A.D. Several other museums and galleries all over the US have been inundated by bodhisattvas, dancing Shivas, gilded toys of Vishnu and an assortment of erotic sculptures.

Of particular interest is the exhibition on Indian terracotta art—a "people's art"—which will be housed in the American Craft Museum, New York, in September. The exhibits will trace the significance of this art right from the Indus Valley Civilisation (c. 2500-1500 B.C.) till the contemporary period. Some Indian potters will demonstrate the technique of making terracotta objects.

The Metropolitan Museum of Art, New York, will present masterpieces from India's stream of sacred and secular traditions. They will represent our religious and courtly traditions as well as the lesser known art and artefacts of the tribal and folk communities.

Architecture

A cultural exposition cannot afford to neglect the extraordinary range of architectural skills generated by India over the centuries.

Exhibits, including a Khajuraho temple, the Padmanabhapuram Palace in Trivandrum, the Sanchi *Stupa* and the master plan for the city of Jaipur, will be displayed. India's ability to interact with and assimilate influences outside the traditional folds find an expression in the interesting

array of buildings from the Mughal, Lodhi and British periods. Miniatures exhibited will include the Muslim capital of Mandu in MP, works by Edwin Lutyens in New Delhi, Claude Batley's designs, the work of Corbusier in Chandigarh, as well as examples of current urban typologies. Besides, the important principles of Indian architecture will be presented through photographs, drawings, models, audio visuals etc.

Festival Of Science

Science and technology have been a part of Indian tradition since ancient times. India's contribution to astronomy, chemistry, mathematics, metallurgy, medical-sciences, architecture and ship building, to name a few, have been significant. Modern India continues to forge ahead in making India a technological success. Besides, the country has gained notable success in food production and in the increase of life expectancy. India has also been a pioneer in the small-scale sector, has set up a station in Antarctica, has acquired self-reliance in nuclear power generation and is fast developing her space programme. The

(Continued on page 55)

CULTURAL DISCORD

Much water flowed down the Ganges before its waters reached Paris to be mingled with the Seine. The culture war that raged in the capital over the non-selection of the prima donnas Yamini Krishnamurthy, Sonal Mansingh and Uma Sharma, for the Paris festival, went to the extent of their staging a walk-out in a programme organised by the Sangeet Natak Akademi, to pay homage to the legendary dancer Balasaraswati on May 13.

Some grist to the controversy mill was added by the Chairman of the Akademi, Dr Krishna Menon, in a TV interview where he suggested the idea of new, young dancers representing India at the festival.

Matters again came to a head over the issue of the shipment of Indian art treasures and objects of worship which could be misappropriated or damaged during transit. A citizen's group in Tamil Nadu obtained a court order staying the shipment of four bronze sculptures from the Paruthiyur Temple in Tanjavur on the ground that the display of the images in a foreign land could offend local religious sentiments.

Even Pupul Jayakar, chairperson of the festival committee, came under fire when she made a public disclaimer that she had seen the list of objects to be sent. An angry Dr Lakshmi P. Sihare, Director of the National Museum, reportedly called her a "liar" and condemned the "cultural exploitation" of Indian art treasures.

ARMING FOR PEACE

BY U. N. KUMRIA

The Indian Ocean is to remain a zone of peace, despite the fact that the super-powers are aiming to establish a new military equation in the region. Inevitably our defence forces are being strengthened by boosting indigenous production of defence equipment.



High stakes: India is rapidly acquiring sophisticated weaponry for any eventuality.

National defence depends upon a number of factors that span the fields of geo-strategy, national interests and international relations. India's location as a littoral state in the Indian Ocean, is one reason for its being a dominant nation committed to the establishment of peace and stability in the region.

The Indian Ocean is bound by the east coast of Africa, Sri Lanka, Burma, Indonesia, Malaya, Singapore and Thailand. The Red Sea, the Arabian Sea and the Bay of Bengal form a part of this ocean. At one time the Indian Ocean was considered a 'British Lake' as the entry and exit points at the Cape of Good Hope, Aden, and Malaccan Straits were in the hands of the British and its sway was felt in South Africa, East Africa, Aden, India, Burma, Malaya, Australia and New Zealand.

This ocean is a major area of concern for India due to its increased military and naval interest and the presence of super-powers as well as extra-regional powers in the area. The changed US military perceptions have created a crescent of conflict extending from Egypt in the west to Pakistan in the east and Kenya to the south.

The focal point of this crescent is the Persian Gulf and Arabian Peninsula which contain about two-thirds of the world's oil deposits. However, those deposits have now started dwindling at a fast pace. The prolonged conflict between Iran and Iraq has further heightened the tensions around the Gulf region whose oil resources are of vital importance to the world. In order to safeguard her interest in the troubled crescent, the US has created CENCOM (Central Command) which has superseded the earlier Rapid Deployment Force of over 1

lakh troops located in Tampa (Florida) and which can be ferried to the scene of action in fast moving ships and aircraft. Incidentally, the headquarters are proposed to be shifted to Masirah, Oman. CENCOM is closely linked with PACOM (Pacific Command) whose jurisdiction will cover the entire Indian Ocean, including Diego Garcia and South-East Asian Region, extending from Malaccan straits to Japan, which is updating her armed forces (self-defence forces) in order to defend the region to a radius of 1,000 km.

The countervailing force in the region is USSR which has a naval base with facilities from Vietnam and Kampuchea in the east to Aden in the west. The vast military and naval presence in this region of Indian Ocean poses a great threat to the sovereignty and independence of the littoral states. The responsibilities of the Indian Navy have considerably increased and it has to play a major role in defending India's maritime interests. We have an exclusive economic zone of 320 km from the coast-line that consists of an area of 25 lakh sq km containing off-shore oil installations, mineral and oil wealth.

Indian Navy

Our indigenous construction programme has received a boost with the commissioning of two seaward-defence boats, two survey crafts and one torpedo launch and recovery vessel during late 1984 and early 1985. The indigenous construction of our first submarine has also started.

The most notable amongst the acquisition of the Indian Navy has been the Sea-Harrier from the UK. Equipped with a modern radar and guided missiles, the primary role of the Sea-Harrier would be

the air-defence of the fleet by day and night. This aircraft can deliver very effective anti-shipping strikes with guns, rockets, bombs and missiles at long ranges. Its rotating exhaust nozzles provide the Sea-Harrier with remarkable take-off and landing capability. It can take off in an area of just 300 sq ft and land vertically like a helicopter inside a circle of 70ft radius. While capable of attaining forward speeds of upto 700 miles per hour, it can also fly backwards at 45 miles per hour. The Navy with a budget of nearly Rs 602 crores during 1985-86 has three Godavari class frigates under construction which are totally Indian in concept and design. Though India cannot afford to match the naval strength of the superpowers, she will need fast moving naval task forces with air-craft carriers to provide adequate air-support. She will also need a trained force of infantry marines capable of moving swiftly to the defence of our island territories.

Military Equation

In the sphere of immediate and potent threats, continental India is to be specially wary of the imminent threat from the land frontiers. The situation is not too different from what it was in the early '60s when the Chinese successfully annexed 12,000 sq km in Ladakh to open up the Sikkim road that linked China to their eastern most military outpost of Xingqiang on the Russian frontier. The strategic interests of China in the Ladakh region at that time were camouflaged by claims in the north-east where she fought a short but decisive war to lock up Indian forces on two fronts while she consolidated herself in the west. Chinese claim on Arunachal Pradesh, which were defeated during the IXth ASIAD when they objected to the presence of a contingent from that state, is another instance.

In 1983, the Karakoram Highway was constructed through Pakistan-occupied Kashmir which linked China to Pakistan. Despite India's protests, the construction continued and it has been interpreted as an attempt to formalise the illegal transfer of about 4,500 sq km in the Karakoram watershed in Shaksgam Valley during the Sino-Pak Agreement of 1963. The 800 km long Karakoram Highway links Sikkim in China to Muzaffarabad in Pakistan-occupied Kashmir (POK) and passes through the 4,530-m high Khunjerab Pass.

The Pakistani assault on Indian posts in glacial regions of Siachen from June 1984 onwards is another attempt to take advantage of the undelineated area in Ladakh. Both the Karachi Agreement of 1949 and the Simla Agreement of 1972 had terminated the ceasefire line and the line of control respectively at a point near Shyok river in Ladakh and thereafter it was merely mentioned "Thence Northwards to

glacier". The Indian Army had been patrolling these glacial regions since 1948 and was able to defeat repeated Pakistani attempts.

Pakistan has been and still remains India's principal security concern. It has taken full advantage of the continued Soviet presence in Afghanistan and the situation in West Asia to strengthen its role as the frontline state in the US strategic perceptions. Acquisition of highly sophisticated weapons such as the additional supply of F-16s, TOW anti-tank missiles, the Harpoon missiles, the Vulcan phalanx air defence equipment, the Mohawk battlefield surveillance aircraft, the Hawkeye or Equivalent Early Warning System mounted on transport aircraft and now the shoulder-held Stinger Surface to Air Anti-aircraft Missile capable of effectively

engaging low altitude high speed jet aircraft, propeller driven planes and helicopters with its in-built Identification Friend or Foe (IFF) are far beyond Pakistan's legitimate defence needs and give her an edge in offensive capability. As there has been no significant change in our relations with China, the border question has not been settled in spite of five rounds of talks.

In the meantime, China has launched a massive programme of modernisation of its defence forces. The present military balance poses a greater threat from Pakistan which is linked to the US through a security pact. China, too, has the capability to improve her strategic posture in the West while attempting to lock-up the bulk of India's Armed Forces in the north-east.

NEIGHBOURLY STRENGTH

In less than four decades since independence India has faced four attacks—three from Pakistan in 1948, 1965 and 1971 and one from China in 1962. The armed strength of these countries based on statistics published in the 1985 edition of *International Institute of Strategic Studies*, London, and the 1981 *White Paper* published by the Defence Agency, Japan, are described below.

CHINA

Military power is formed by the People's Liberation Army which comprises the Field Armies or the Main Force, Regional Force, Naval force and Air Force as well as 100m strong Peoples' Militia.

Nuclear Forces: These comprise six operational Inter-continental and Ballistic Missiles (ICBMs), with a range of 10-13,000 km and a warhead of 3 to 5 Megatons, between 60 and 85 Intermediate Range Ballistic Missiles (IRBMs) with 2 Megaton warhead with a range of 5,500 km, 50 Medium Range Ballistic Missiles (MRBMs) with a range of 1800 km, and a 20 kiloton warhead. 120 H-6 (TU-16) strategic bombers are also available. ICBM capability has been tested in South Pacific to a range of 12,000 km. China is reported to be having a tactical nuclear force of 150 nuclear war-heads in the 20 kiloton range capable of delivery by 180 mm artillery and T-5 short range ballistic missiles with 100 km range (SRBMs).

Army: The 3.6 m strong army comprises 132 divisions of Field Armies (including 11 armoured divisions, 118 infantry divisions and 3 airborne divisions). The country also has an additional force of 85 divisions of the Regional Forces, equipped with a total of 12,000 tanks.

Air Force: China has some 6,000

combat aircraft in the range of MiG 19 & 21; some later versions are now being developed.

The Navy: The country has 1910 ships including 88 submarines and 39 other ships such as destroyers and frigates.

PAKISTAN

Army: The Pakistani army is comprised of 4½ lakh troops with a reserve of 5 lakh men organised in 7 corps HQ, one Territorial command, two armoured divisions, 16 infantry divisions, four independent armoured brigades, five independent infantry brigades, seven artillery brigades, two anti-aircraft artillery brigades, six armoured reconnaissance regiments, six SAM (Surface to Air Missile) batteries with six crotales (each four missiles), two Special Service Groups, 30,000 contract personnel in Saudi Arabia, 20,000 in Jordan, Libya, Oman & UAE, Para-Military Forces over 1 lakh comprising National Guard (22,000), Frontier Corps (65,000), Pakistan Rangers (1,13,000), Coast Guard (2,000) and Frontier constabulary (5,100), 1,370 tanks (370 M-47/48 and 1000 T-59) and some 1000 pieces of guns.

Navy: There are about 11,000 sailors; 11 submarines (two Agosta, four Daphne, five SX-404 midget); eight destroyers (one British country, six US Gearing, one British Battle); one British Cruiser; 19 Coastal patrol craft and Reserve-5000 sailors. **Air Force:** The country has a strength of 17,600 airmen with 314 combat aircraft organised into 21 squadrons—nine fighter ground attack (five with Mirage and four with Chinese O-5), nine fighter ground attack/interceptor squadron with Chinese F-6 with one converting into F-16, one reconnaissance squadron with Mirage, and two transport squadrons.

India's Armed Strength

India's response to the changed military equation and perceptions should be three-fold. Firstly, we need strong, mobile and hard hitting forces in the plains from Rajasthan to J & K capable of launching a strong counter stroke to defeat any military adventure. India's planned production of sophisticated T-72 tanks and BMP Infantry Combat Vehicles, at Avadi in Madras and at Medak in AP respectively, is a step in the right direction. Additionally, our indigenous main battle tank, Arjun, has finally emerged in prototype and will take its pride of place amongst Indian mechanised forces by the '90s. This tank would have a new kind of armour known as Kanchan which would be very difficult to pierce. It will also have hydropneumatic suspension and a very powerful gun. Its main feature will be the 1,500 hp engine which is expected to be developed indigenously. Similarly air defence and engineering equipment are also being updated.

In the field of artillery India is in search of a heavy artillery gun. Our main requirement would be a modern and sophisticated communication system along with adequate electronic warfare devices. In order to defend our western and north-eastern borders we will need to equip our armed forces in mountainous regions with sophisticated weapons. Heavy machine guns are being introduced to augment the fire-power of infantry battalions. As modern day battle environment favours night operations especially for our infantry, modernisation measures include procurement of items for infantry which will enhance its night fighting capability. Battle field surveillance radars, night vision binoculars and passive goggles are being introduced. The army's budget estimate for the current year of about Rs 4,787 crores constitutes a major component of the overall budget of Rs 7,118 crores.

The induction of highly sophisticated weapons in Pakistan has increased the responsibilities of the Indian Air Force. The acquisition of Mirage-2000 has provided an additional punch to the Indian Air Force. This aircraft is, perhaps, the answer to Pakistan's F-16. MiG-27m aircraft has already been inducted into the service and with the delivery of more aircraft of this generation like the Jaguar, some of the older aircraft like the Hunter, Canberra and the Sukhoi are on their way out. With the induction of the latest IL-76 long range heavy transport aircraft into the Indian Air Force by the Defence Minister, P.V. Narasimha Rao, in July 1985 our air force has been strategically mobilised. This aircraft can carry a maximum payload of 43 tons over a distance of 4000 km. It

(Continued on page 55)



PUNJAB THE CLOUD LIFTS

The Centre's concerted efforts to resolve the Punjab imbroglio finally paid off when, on Jul 24, a historic memorandum of understanding was signed between PM Rajiv Gandhi and Sant Harchand Singh Longowal of the Akali Dal. Although the Rajiv Government's sagacious handling of the Akalis had succeeded in mellowing a large number of them and had resulted in bringing a formerly recalcitrant Longowal to the negotiating table, the accord came as a surprise even to the most optimistic of political onlookers.

It goes to the Punjab Governor, Arjun Singh's credit that he justified the trust the Centre had placed in him, that too, in an incredibly short span of less than five months. It was his secret parleys with the higher ranks of the Akali leadership and his sensitive handling of an explosive issue which prepared the ground for the talks. A day prior to the Rajiv-Longowal talks, the Centre came up with yet another announcement designed to placate the Akalis—the abolition of special courts set up in Punjab and Chandigarh for the trial of suspected terrorists. This had

TERMS OF AGREEMENT

Listed below are the main points of agreement included in the memorandum of understanding between the Centre and the Longowal led Shiromani Akali Dal, signed on Jul 24, 1985.

- Portions of the Anandpur Sahib resolution dealing with Centre-state relations to be referred to the Sarkaria Commission.
- Transfer of the Union territory of Chandigarh to Punjab with effect from Jan 26, 1986.
- Setting up of commissions to determine Hindi-speaking areas of Punjab to be transferred to Haryana in lieu of Chandigarh and to go into claims for readjustment of the Punjab-Haryana boundary.
- With respect to the All-India Gurdwara Act, the Centre is to consider legislation to be framed in consultation with concerned authorities which also fulfils constitutional obligations.
- On the issue of distribution of the Ravi-Beas waters, Punjab, Haryana and Rajasthan to continue getting waters as on Jul 1, 1985. Completion of the Sutlej-Yamuna link canal by Aug 15, 1986. Reference of additional claims of Punjab and Haryana to a tribunal.
- Extension of inquiry into the November riots to cover Kanpur and Bokaro in addition to Delhi.
- Rehabilitation of army deserters through gainful employment. Also, merit to remain the sole criteria for further recruitment in the Indian Army.
- Lifting of anti-terrorist laws particularly the Armed Forces Special Powers Act from Punjab.
- Compensation to be made for all those innocent persons killed in the agitation or any action since Aug 1, 1982 as also for any property damaged during the agitation period.
- Special courts to be abolished. Existing special courts to try only cases of waging war against the state and hijacking. All other cases to be transferred to ordinary courts.

been a major pre-condition of the Akali Dal for resumption of talks and was an essential pre-requisite for holding elections in the state. But perhaps more important was the part played by Longowal. Keeping in view the rampant factionalism in the Akali Dal, his willingness to negotiate with the government was indeed commendable.

The 11-point agreement between the Centre and the Akalis covers all matters of dispute between the two sides. Its essential components include transfer of the Union territory of Chandigarh to Punjab with effect from Jan 26, 1986, reference of parts of the Anandpur Sahib resolution dealing with Centre-State relations, to the Sarkaria Commission, rehabilitation of army deserters by providing them with gainful employment, offer of compensation to innocent people killed during the agitation and extension of the inquiry into the November '84 Delhi riots to include Bokaro and Kanpur. (See box)

The signing of such a memorandum of understanding by the PM himself is an unprecedented event in the history of Centre-state relations in India and only goes to underscore the top priority accorded to the Punjab problem by the Centre. Echoing the sentiments of the Indian masses, Rajiv said that he hoped this would "bring to an end a very difficult period through which the country passed. It will be the beginning of a new phase of working together to build the country, to build unity and integrity." This statement was accompanied by an equally heartening declaration by Longowal: "The period of confrontation is over. The morcha stands automatically withdrawn."

But while this victory of amicable talks over the bombs and bullets that ricocheted across Punjab for four traumatic years elicited jubilation from most quarters of the Indian populace, it stirred up a hornet's nest in Punjab. The SGPC President, Gurcharan Tohra and the ex-CM, Prakash Singh Badal were vociferous in their outright disapproval of the accord. And the leader of the United Akali Dal, Baba Joginder Singh rejected it in toto. Longowal's arrival in Amritsar gave the incensed rival Akali groups an opportunity to demonstrate their displeasure. And the Dal's meeting on Jul 30 to discuss the accord resulted in group clashes. The ensuing violence forced the police and para-military forces to intervene. With this the schism in the Akali Dal and the Longowal camp and the Joginder Singh camp has assumed ominous proportions.

Besides this, the Rajiv-Longowal accord has come in for some scathing criticism from the affected states of Haryana and Rajasthan. In fact, all the 29 opposition members of the Haryana Assembly have decided to resign *en bloc* to show their resentment against the sacrifice of their states' interests to appease the Akalis. According to the members, it is blatantly unfair of the Centre to concede Chandigarh to Punjab without simultaneously accepting Haryana's claim of Fazilka and Abohar. They also feel that the wording of the agreement is vague in respect of the award of Hindi-speaking areas to Haryana. On the issue of granting river waters to Punjab, Haryana and Rajasthan, they are opposed to the clause by which the states will get water not less than what they were using from the Ravi-Beas system, on Jul 1, 1985, as then Haryana would be getting less than its allocated share of 3.5 MAF.

Rajasthan is also opposed to clause 9 of the agreement regarding the issue of the Ravi-Beas waters. In fact, CM Harideo Joshi is of the opinion that it is an assault on the state's share of river waters. His resentment is partly based on the fact that the Centre did not even consult him on the issue before formulating the accord.

However, the bickerings among the states fade into insignificance when one views the overall gains of the accord. In all likelihood, it signifies the end of a phase of hatred, violence and distrust and the beginning of a phase of amity, goodwill and understanding. The Centre at the moment is busy taking stock of the situation in Punjab before it gives the green signal for the restoration of the already much-delayed democratic rule in a recuperating Punjab.

INDIA-SRI LANKA

PARLEYS AT THIMPU

Dispelling the uncertainty shrouding them, the Thimpu talks did take place as scheduled. Bringing the Sri Lankan Government and the Tamil militants face to face yet again—but this time across the negotiating table. In the first-ever negotiations between the two warring factions, the Jayewardene government finally accorded recognition to the Tamil militant groups. Their six-day talks at the

isolated Bhutanese capital of Thimpu are the first phase in the discussions aimed at finding a lasting solution to the ethnic problem in the strife-torn island nation.

The Sri Lankan side, headed by Hector Jayewardene, brother of the President, represented the Sri Lankan Government. The Tamil militants, comprising the People's Liberation Organisation of Tamil Eelam (PLOTE) and the four-group alliance, Eelam National Liberation Front (ENLF) which constitutes the Liberation Tigers of Tamil Eelam (LTTE), the Eelam Revolutionary Organisation (ERO), the Tamil Eelam Liberation Organisation (TELO) and the Eelam People's Revolutionary Force (EPRF) sent their representatives. The moderate Tamil United Liberation Front (TULF) was also represented by Amrithalingam. It goes to the credit of the Tamils that for once they exhibited a semblance of unity. It is believed that the closed door talks at Thimpu were restricted to violations of the ceasefire. But even as some headway in the negotiations was reported with the Sri Lankan government lifting curfew restrictions in the northern province—a measure agreed upon in the talks—and announcing its decision to free over 600 Tamil guerilla suspects, an abortive bid on the life of the Sri Lankan President very nearly jeopardised them. The arrest of two suspects allegedly assembling timing devices on two packages of Indian-made gelignite (an explosive) implicated not only the Eelam Revolutionary Organisation of Student but also hinted at an Indian involvement. The ERO and other Tamil militant groups immediately issued denials and, in fact, accused the Sri Lankan authorities of planning a hatchet job to lower their credibility.

The talks at Thimpu predictably ran into rough weather with the Tamil representatives rejecting the proposals of the Jayewardene government with regard to regional autonomy. The Sri Lankan Government's proposals for devolution of powers at district and provincial levels were according to them a replay of Jayewardene's 1984 proposal package and did not even remotely meet the basic aspirations of the Tamils.

Fearing a breakdown of negotiations, India once again decided to act as mediator and Foreign Secretary, Romesh Bhandari, rushed to Thimpu to placate the two sides. With the result that the negotiating teams ended the first phase of discussions on an amicable note. The second round of talks scheduled to commence on Aug 12 are expected to deal with substantive issues. In any case, the Thimpu sojourn gave the two sides a chance to air their grievances, if nothing more.

GUJARAT

SOME HEADWAY

One of the first major moves by the new CM Amarsinh Chaudhary to restore normalcy in the ravaged state of Gujarat was the complete withdrawal of the army on Jul 16—three months after its deployment in the state in the wake of violent disturbances. In fact, right from the word 'go', Chaudhary has handled the jinxed reservations issue with tact and deftness. Even while forming his new cabinet he dropped five Kshatriya ministers and inducted *bania* and *patel* legislators to give more representation to major communities. He also appointed two cabinet sub-committees to negotiate with the agitating anti-reservationist leaders and the striking government and panchayat employees in the wake of a call for 'jail bhara' programme by the agitationists for Jul 19.

These concerted efforts yielded results when after prolonged discussions with the state government, the agitation leaders announced, on Jul 18, that an accord had finally been reached with the government and decided to postpone the 'jail bhara' programme. This was followed by a withdrawal of the Gujarat agitation on Jul 19 following an agreement between the two sides. For, unlike his predecessor, Chaudhary decided to tackle the bull by the horns. His four-point package exhibited an amazing political shrewdness and was accepted by both the Akhil Gujarat Navrachna Samiti (AGNS) and the Akhil Gujarat Vali Mahamandal (AGVM). With regard to the 18% hike in reservations quota for backward classes, Chaudhary decided to scrap the increase altogether until a national consensus on the issue is evolved. Also, the existing 10% reservations for other backward classes listed by the Baxi-commission, which expires in March 1988, would be reviewed by a committee comprising a sitting high court judge and two retired high court judges, which is to submit its report latest by December 1987. An inquiry commission headed by a high court judge would also be constituted to probe into the incidents of violence in April. And finally Chaudhary also agreed to release the detained student leaders and agitation leaders and withdraw charges against them.

But apparently violence has taken firm roots in the state. Within 36 hours of the army withdrawal, violence escalated in the state with

reports of killing, loot and arson going in at an alarming frequency. Obviously the reservations issue has receded into the background, for the violence in Gujarat now has a distinct communal tint. And to complicate matters further, splinter groups of the spearheading AGVM and AGNS, not satisfied with the agreement between the government and the anti-reservationists, decided to continue with their stir. Also the government's refusal to abolish the caste based roster has served to incense the striking panchayat and government employees further.

The ceaseless violence prompted Chaudhary to take stringent measures, which include the imposition of the Anti-terrorist Act, providing for capital sentence of death or life imprisonment depending on the magnitude of the crime, in the state. And the attaching of properties of persons wanted by the police and framing of legislation preventing the distress sale of houses in disturbed localities.

Meanwhile undeterred efforts by the state government have met with success once again. On Jul 30, the Gujarat hardliners including the agitating splinter groups signed an agreement with the government. When the government agreed to their demands of setting up engineering and medical colleges in the state during 1986-87; consideration of economic criteria as one of the yardsticks of reservations and initiating administrative measures to give preference to Gujarat in-class three and four services of statutory boards and corporations.

Despite the sporadic incidents of violence, some semblance of normalcy has already been restored in the state. Schools and colleges have reopened although the attendance is still poor. There are indications that the much-delayed exams will also be conducted. And the state government is taking all possible steps to facilitate Gujarat's limping progress.

INDIA-PAKISTAN

ARMS TALKS FUTILE

Once again not much headway was made in the Indo-Pak talks. Coming as they did in the wake of Pakistan Foreign Minister, Sahibzada Yaqub Khan's visit, the latest four-day official level talks failed to cover any fresh ground.

The delegations of the two countries, led by their respective foreign secretaries—Romesh Bhandari from India and Niaz Naik from Pakistan—once again discussed the entire gamut of Indo-Pak relations as well as regional issues like Afghanistan, Sri Lanka and South Asian regional cooperation. While these talks were specially arranged for discussing proposals for a non-aggression pact and a treaty of peace, friendship and cooperation between Pakistan and India, no constructive steps were actually taken in this direction.

However, the talks provided India with the opportunity to convey its concern over Pakistan's nuclear war programme and get Pakistan's version about its testing a trigger for nuclear bombs. The acquisition of sophisticated US arms by Pakistan and its role in the Punjab developments also figured in the talks. Naik also had a meeting with PM Rajiv Gandhi.

The talks concluded with both countries issuing a joint statement in which it was emphasised that they would continue with their efforts aimed at the conclusion of a comprehensive treaty between the two countries. They also agreed to continue with the exchange of ministerial-level visits to promote mutually beneficial programmes in areas of common interest.

KANISHKA

DELVING INTO THE UNKNOWN

It is too early yet to pass judgment on the happenings on Jun 23, the Black Sunday. Even though, the vital black box constituting the Cockpit Voice Recorder (CVR) and Digital Flight Data Recorder (DFDR) was brought to India following a remarkable recovery from the Atlantic Ocean, no breakthrough has been made in ascertaining the cause of Air India's Boeing 747, Emperor Kanishka's crash. In which all 329 people aboard the ill fated plane plunged to a watery grave in the choppy ocean.

A crash probe team headed by Justice B.N. Kripal of the Delhi High Court initiated investigations on Jul 15. Preliminary runs revealed that both the CVR and the DFDR are in good condition despite the numerous shocks they must have sustained during and after the crash. The Kripal Commission hopes to complete preliminary investigations within six weeks.

Up until now all indications point towards a mid-air explosion. The CVR tape has recorded a muffled bang indicative of a blast or explosion seconds before the plane disappeared off the radar screen of Shannon Air Tower Control. However, the noise of the engines and radio disturban-

...has culminated the conversation between the pilot and co-pilot. And this will be audible only after these unwanted disturbances have been filtered out. With respect to the DFDR the computerised coding of 48 of its 300 parameters has already been completed but no conclusive evidence has been revealed so far.

Another finding which indicates the possibility of an explosion is that all four major electronic components of the aircraft namely the CVR, DFDR, transponder and air data computer failed abruptly and simultaneously. These vital components are designed in such a way that even if one or more of them fails the others keep working unhampered. Therefore, only some instantaneous and extremely forceful shock could have caused their collective and abrupt failure.

A new theory regarding the cause of the air crash has been advanced recently. According to this theory the debris of an unmanned Soviet rocket, Progress 24 could have hit the Kanishka. For the unburnt, jettisoned parts of this rocket entered the earth's atmosphere at approximately the same latitude as the Boeing 747 and about the same time. And although investigators at Cork have denied this possibility, research teams are keeping open minds in this regard too. Meanwhile the Kripal Commission is expected to start daily proceedings from September. But the stark fact remains that no amount of investigation can undo the damage this enormous tragedy has done.

J & K

SHAH VS ABDULLAH

Minor upheavals time and again have become part and parcel of life in J & K. But when an alleged abortive bid was made on the life of the still popular ousted CM Farooq Abdullah, the clamourings within the state became audible. Abdullah alleged that one of the ministers of the G.M. Shah regime had masterminded the attempt. And the bombs that exploded at the scene of the Martyr's Day rally being addressed by the former CM only serve to lend credence to the allegations. Further, Shah's refusal to order a judicial probe into the incident were viewed with suspicion.

That the Centre is dissatisfied with the way CM Shah is handling things in the state is no secret. In fact, at the J & K Congress (I) conference in Aharbal last month the party leaders had openly criticised the inefficiency of the Shah government. Also Governor Jagmohan and Abdullah have repeatedly requested the Centre to impose Governor's rule in the state and thereby pave the way for fresh Assembly elections, in the wake of the deteriorating law and order situation. The Centre, however, has steadfastly refused to consider this step.

Initially, the Congress(I) leadership had, after the formation of the G.M. Shah ministry, refrained from taking part in the governance of the state and only extended support from outside. But the fact that the Shah government has lately been under attack for non-performance and mounting corruption from all quarters obviously perturbed the Centre sufficiently to summon 40-odd Congress(I) leaders of the state including the Pradesh Congress Committee President to New Delhi. Apparently to make an assessment of the prevailing situation in the state.

The arrival of these leaders sent speculations rife and it was strongly suspected that New Delhi was planning to form a coalition government in J & K. The leaders had discussions with PM Rajiv Gandhi and his advisors. And following these, the All India Congress Committee General Secretary, Rajendra Kumari Bajpai, put to rest all suspicions regarding the formation of a coalition government. Also, the PM himself summoned Shah to the capital to discuss with him the various controversies in the state. And extended unequivocal support to the Shah ministry. Apparently the Centre is giving Shah another chance to make amends for the follies he has committed in his one year chief ministerial stint. Meanwhile, the National Conference (Farooq) has decided to present a memorandum to the Sarkaria Commission on Centre-state relations. A considerably mellowed Abdullah is, at the moment, trying to establish contact with the New Delhi high command. In all possibility, the PM will be visiting J & K himself sometime in September. Perhaps the outcome of the family feud-turned-political conflict will be decided then.

TELUGU-GANGA PROJECT HIGH AND DRY

The non-Congress neighbouring states of Karnataka and Andhra Pradesh (AP) have fallen out of each other's favour owing to a controversy ignited by the decade-old Telugu Ganga project. It all began with the Andhra CM N. T. Rama Rao arbitrarily reinterpreting the Bachawat Tribunal stating that the tribunal provided for an unrestricted

use of surplus water in the Krishna river to his state.

An incensed Ramakrishna Hegde requested the Centre to stall the Telugu Ganga project. This project, which essentially aims at providing irrigation facilities to 2,40,000 hectares of land in the severely drought prone Rayalaseema, Nellore and Chittoor districts at also supplying 420b. litres a year (bly) of drinking water to Madras city, has become unacceptable to the Karnataka CM—thanks to some high handedness on the part of NTR.

The Krishna Water Disputes Tribunal or the Bachawat Tribunal, as it is popularly called, was set up in 1973 to resolve the water disputes. It held that if the inflow of waters into the Krishna was 62,640 bly against the norm of 57,680 bly established on the basis of 75% dependability, then the surplus would be shared between Karnataka, AP and Maharashtra in the ratio 50:35:15. However, if the inflow exceeded 62,640 bly, then the share ratio was to be 50:25:25. Also, the water flow of 2,060 thousand million cubic feet (tmcft. one tmcft=28 bly) was allocated to AP, Maharashtra and Karnataka to the tune of 800 tmcft, 700 tmcft and 560 tmcft respectively. Further, the three states had agreed to part with 5 tmcft or 140 bly to provide Madras with drinking water in 1976.

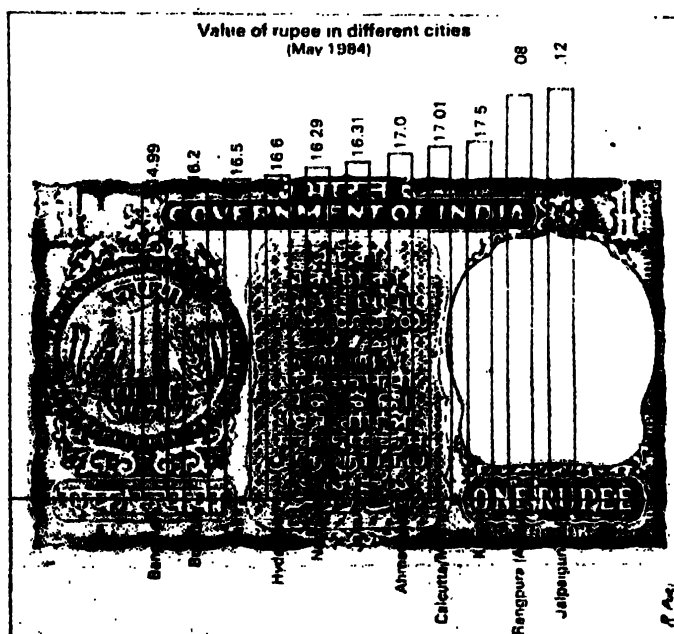
However, the subsequent inclusion of the irrigation component into the Telugu Ganga project is now being strongly objected to by Karnataka as it feels that a significant portion of the Krishna waters will be tapped in the long run. The basis of this objection is two-fold. Firstly, the project will involve a greater draw on the Krishna waters by AP than the stipulated 800 tmcft a year as AP, having already committed 749 tmcft of its quota, is now left with virtually no water to channelise into the parched Rayalaseema area. Secondly, the project as it emerged ultimately, involves a marked deviation from the original 1977 interstate understanding that it would cater solely to the provision of drinking water to Madras.

And while Hegde is justified in his opposition of NTR's claims, the latter is also to be held responsible for the shelving of a project which would have benefitted a large number of people in the long run. For, AP could have gone ahead with the project without necessitating a significant tap on Krishna waters surplus. Under the Godavari Water Disputes Tribunal, of 2,240 bly of the Godavari waters diverted to the Krishna 1,568 bly have been awarded to AP—enough water to float the Telugu Ganga project. The matter has now been placed before the Centre for consideration.

SC JUDGMENT

FACILITATING DISMISSALS

The Supreme Court verdict regarding the sacking of government employees has armed the executive with sweeping powers. And has substantially jeopardised the excessive job security enjoyed and often misused by civil servants. 'Government servants who are inefficient, dishonest or corrupt or have become a security risk' can now be



dismissed or removed from service without an inquiry under Article 311 (2) (B) of the constitution—for 'public good' and in 'public interest'.

Article 311 (2) (B) states that a person can be removed or reduced in rank without an inquiry if the disciplinary authority is satisfied that an inquiry is not reasonably practicable. Also, an inquiry need not be held in the case where the government servant is convicted on a criminal charge or if the President or Governor is satisfied that it is not expedient to hold such an inquiry under Article 311 (2)(A) and (C) for preserving the security of the state. The Supreme Court has, however, ruled that denying the civil servants a right to be heard does not violate the principles of natural justice and Article 14 (which concerns equality before law) of the Constitution. Rather the court went on to state that 'sympathy and commiseration cannot be allowed to outweigh considerations of public policy, concern for public interest, regard for public good and the prerogative dictate of a constitutional prohibition.'

With this judgment, the Supreme Court has overruled the three-judge bench's ruling in the Challapann case which held that a delinquent civil servant can only be dismissed or removed from service after he has been given an opportunity to be heard. In addition to this, the Supreme Court also rejected a batch of writ petitions filed by railway employees dismissed from service for taking part in all India strikes as well as a large number of petitions of officials of the MP district police force and MP special armed police force, who were dismissed for alleged involvement in violent incidents, on the grounds that in these cases the public interest and public good had been jeopardised and the country held at ransom.

As such, Article 311(2) stipulates three conditions in which an inquiry need not be held prior to removing or dismissing a civil servant. These include cases where a person is dismissed or removed or reduced in rank on ground of conduct which has led to his conviction on a criminal charge; the authority empowered to dismiss or remove a person or to reduce him in rank is satisfied that for some reason, to be recorded by that authority in writing, it is not reasonably practicable to hold such an inquiry; the President or the Governor, as the case may be, is satisfied that in the interest of the security of the state it is not expedient to hold such an inquiry.

A dismissed civil servant now has only two remedies left with him. He can either make a departmental appeal or make a judicial review. Thus, this Supreme Court ruling should be able to weed out undeserving civil servants from the ranks of the government services.

HARIJANS

UNLEASHING TEMPERS

Karamchedu is a small, prosperous village in Andhra Pradesh. Hundreds of kilometers away in the state of UP is another village—Sinhpur-Rawal. Both have suddenly come into the news, and that too for the same appalling reason. Atrocities inflicted by caste Hindus on the Harijans.

In Karamchedu, on Jul 17, five Harijans were massacred and numerous others injured when a mob of about a thousand caste Hindus armed with lathis and blunt instruments cordoned off the predominantly Harijan section of the village and attacked the inhabitants. What triggered off this assault was the scuffle that followed an upper caste boy's attempt to bathe his bullocks in a tank from which the Harijans drew their drinking water. Fearing for their lives the Harijans fled their village and sought refuge in a church in the nearest town of Chirala. The Union Minister of State for Home Affairs, Ram Dulari Sinha, went to make an on-the-spot assessment of the Karamchedu massacre which resulted in an open confrontation between the NTR Government and the Centre over the minister's alleged high-handed treatment of government officials in Andhra.

Meanwhile, four days later on Jul 21, Harijans in Sinhpur-Rawal village were subjected to similar treatment when six of them were ruthlessly shot by caste Hindus of their village for opposing bonded labour. The incident prompted the Harijan community to flee.

In both these macabre incidents, considerable amount of property was destroyed and the womenfolk humiliated by the socially privileged classes. Which only goes to prove that even 38 years after independence, the roots of casteism are still prevalent among the Indian masses.

ASSAM

THE COUNTDOWN BEGINS

There is cautious optimism in the government camps as well as those of the agitating Assamese leaders regarding the possibility of a settlement to the festering Assam problem. For past experiences have made both sides wary of raising too many hopes. This time though

Union Home Secretary, R.D. Pradhan, sent to Shillong to prepare ground for a political dialogue between the agitating All Assam Gana Sangram Parishad (AAGSP), and All Assam Students Union (AASU), returned as a harbinger of hope. According to him, the atmosphere in the troubled state was now conducive for the holding of talks as considerable progress had been made in narrowing down differences.

Pradhan's two-day Shillong talks with the Assam agitation leaders primarily centred around the demand of the movement leaders to detect and deport foreign nationals, the dissolution of the state Assembly and proper revision of electoral rolls. Both the Centre and the Assam leaders appear keen on an early solution to the vexed issues as both have yielded considerable ground to facilitate a settlement. The agitation leaders have dropped their demand for 1961 as the cut-off date for detection of illegal immigrants. The Centre too appears willing to concede that 1971 need not be the cut-off year for deportation. However, since the electoral rolls on the basis of 1971 as the cut-off year are nearly complete the selection of any other cut-off year will entail revision of rolls which will undoubtedly delay elections.

There is no likelihood of a package settlement, however, since the Centre has made it clear that the dissolution of the state Assembly is the constitutional prerogative of the CM. Meanwhile, CM Hiteswar Saikia has made no secret of the fact that his loyalties lie with the Centre for solving the issue of foreign nationals. At the moment, then, a formal invitation to the AASU and AAGSP for talks, to solve the Assam problem features prominently on the Centre's cards. **The accord was finally signed on Aug 15 at 2:45 am. For details see next issue.**

FLOODS

WATER, WATER EVERYWHERE

The weather gods are playing havoc in the country again. Practically the entire country is reeling under floods or drought. While major parts of the north, north-east, west and south lie submerged in flood waters, MP is facing the worst drought in over 50 years with monsoons already a month late.

In the north, unprecedented rains in J & K, Punjab, Himachal Pradesh, Bihar and UP have been accompanied by calamitous flash floods which have drawn the states into a chaotic whirlpool, Punjab being probably the worst affected. In all, 800 villages in this state have been seriously affected by flash floods. And the city of Jalandhar, lashed by the heaviest rains since 1955, is at the vortex of the whirlpool. Virtually cut off from the rest of the country, it is a marooned city. Already the death toll in the city has crossed the 80 mark. The Ganga has also crossed the danger mark in Bihar which is, in addition being threatened by the rising Mahananda, Kosi, Gandak and Burhi Gandak. Flash floods have also wrought destruction in W.P. and J & K.

The flood situation in the north-east is also grim with the Brahmaputra flooding its embankment. All major rivers in Arunachal and West Bengal are in high spate too. In the south, Kerala, in particular, faces a serious flood menace. Already the floods have affected over 10 lakh people in Punjab and Himachal Pradesh, nearly 3 lakh people in Assam, 1.36 lakh in 129 villages spread over six districts in Bihar in addition to mammoth losses of life, cattle and property. And although the army is engaged in relief operations in the critically affected areas and has put up temporary relief camps for the deluged, it will take quite some time to rehabilitate the thousands of flood victims all over the country.

Meanwhile MP is fast turning into a wasteland for want of rain. Combating against these natural catastrophes will prove to be an uphill task in itself.

SHARE PRICES

UNPRECEDENTED BUOYANCY

Ever since the announcement of the 1985 Budget, there has been an unprecedented buoyancy in the stock markets. During the past five months, *The Economic Times* all-India share price index (base 1969-70=100) has shot up by 200 points touching an all-time peak of 494.1 in the process.

Frantic efforts by worried stock exchange authorities have failed to curb the upturn. The measures taken in this direction included the imposition of an exorbitant 40% daily margin against gross purchase of all categories of shares, restrictions on trading in specified share, ban on fresh business and so on.

This increase in share prices is perhaps justifiable to some extent keeping in view various steps taken by the government. The liberal

(Continued on page 60)

UGANDA

OBOTE OUSTED

President Milton Obote of Uganda was removed in a bloodless military coup by rebel Ugandan soldiers led by Brig Bazilio Olara Okello, on Jul 27. Ugandan Army Chief, Lt Gen Tito Okello (who is not related to Brig Bazilio Okello) has been installed as President. Though the exact whereabouts of the deposed President are uncertain, it is widely believed that he may have fled to Kenya. Over 20 ministers of the Obote Government have been arrested, and many killed.

The seizure of power by the new military rulers led to a series of bomb explosions that shook the Ugandan capital, Kampala and the Ugandan soldiers went on a rampage looting shops and houses. The new military government sealed the country's borders, dissolved the Parliament and suspended the Constitution. It promised that elections would be held in a short while. In a surprise move, Paul Muwanga, Defence Minister in the Obote Government was appointed PM by the military rulers.

The coup was instigated by tribal rivalries within the army between the Acholi and Langi tribes. Obote was accused of favouring the Langi tribe to which he belongs, and fanning the flames of resentment even further when he promoted his cousin Brig Opon Acak to the post of Army Chief of Staff, thereby bypassing other senior officials like Lt Gen Tito Okello, a member of the Acholi tribe. Continuous guerilla warfare advocated by the National Resistance Army (NRA) and a ruined economy were other factors that eventually led to the downfall of the Obote Government.

Obote, who was Uganda's first President since independence, in 1962, was initially ousted by Maj Gen Idi Amin in 1971. Amin, who unleashed a reign of terror for the next eight years was eventually overthrown by Tanzanian troops in 1979 and Obote was reinstated as President.

A week after the coup, the military regime opened up the sealed borders and several Asians—especially Ugandan Indians—crossed over to Kenya. In an effort to appease the NRA guerilla faction offers for talks were made to the NRA leader, Musoveni, by the new Ugandan leaders.

SOUTH AFRICA

UNDER EMERGENCY

On Jul 20, the South African President Pieter Botha clamped a state of Emergency on 36 districts in the Eastern Cape provinces, Transvaal and Johannesburg, in an attempt to quell the continuing violence that has rocked the country for the past 11 months. Botha invoked the Emergency powers under the Public Security Act 1953, which arms the government with a set of harsh measures including tight Press censorship, the power to impose curfew and arrest people indefinitely without warrants. After two weeks of imposition of Emergency, the death toll rose to 22 with more than 1,400 arrests. School boycotts were strictly observed in the Emergency areas and more than 1,00,000 black students kept away from their classes. It is the first time after 25 years that South Africa has been placed under Emergency, the last being in 1960, when the Sharpeville massacre left 69 dead and 178 injured.

The imposition of Emergency in South Africa was met with international disapproval. The UN Security Council adopted a resolution supporting global economic sanctions against the Pretoria regime. France, which played a major role in sponsoring this resolution, has frozen all new investments in South Africa and withdrawn its ambassador from Pretoria. Britain and the US, South Africa's largest commercial partner, however, vetoed the resolution and stated that extreme measures would, on the contrary, produce negative results. Though the US House of Representatives adopted a Bill supporting moderate economic sanctions against the Pretoria regime, the final vote was debated by the Conservative Republicans and will only be known after the month long Congressional break.

The Reagan Administration's policy of 'constructive engagement' is strongly opposed to such measures and it remains to be seen what the outcome will be. The European Economic Community (EEC) has also recalled its envoys for consultations and unanimously demanded the release of the jailed African National Congress (ANC) leader Nelson

Mandela. Denmark became the first EEC country to close its consulate in protest against the Pretoria regime's policy of apartheid. With pressures mounting, the South African Government hurriedly called back its envoy from the US for a review of the situation. The US ambassador had earlier been recalled after South Africa had illegally raided neighbouring Botswana to flush out ANC guerillas.

The latest series of disturbances began last August when a new Constitution, granting the country's coloureds as well as the Indians, representative rights in the Parliament, was implemented. The blacks, who constitute a majority of the South African population, were still excluded. This exclusion from political power, combined with high inflation and unemployment rates, had made South Africa's blacks less tolerant of the existing state of affairs.

The rallying event for the blacks turned out to be the funeral of four leaders of the United Democratic Front (UDF) party who were mysteriously murdered. At Craddock in the Eastern Cape provinces more than 30,000 blacks congregated, and Allan Boesak, one of the UDF leaders gave a call to boycott the white shops. The effectiveness of the boycott promptly led the repressive white regime to impose a ban on political funerals for riot victims.

Today South Africa is on the brink of a civil war. In July, hundreds of black youths in Soweto went on a rampage to protest against the detonation of 105 black students who were being charged for holding an illegal demonstration at the Soweto mayor's residence. In another incident at Nonwakazi, a black woman who violated the boycott order of white shops was found murdered.

Whether the recent developments in South Africa will diminish the power of the white racist regime or not is difficult to tell. The declaration of Emergency by President Botha is being seen by many as more of a symbolic action to placate the white population and also to reassure his investors that all is within control. Yet it may also be interpreted as a sign that the white regime is finding the already prevalent repressive laws insufficient to suppress the growing tide of black discontent.

USSR

POLITICAL RESHUFFLES

A major shake-up has been taking place in Russia since Mikhail Gorbachev came to power. Changes in posts were accelerated in July, although the Soviet Ministry of Defence has yet to confirm most of them. The most startling reported appointment was that of Marshal Nikolai Ogarkov to the post of Commander-in-Chief of the Warsaw Pact. Until September 1984 he had been the Chief of Staff and a first deputy minister of defence. Apparently, he clashed with Konstantin Chernenko and was removed. Marshal Ogarkov has reportedly been brought back to the centre of authority and, if the rumours are true, he will replace the Defence Minister, Marshal Sergei Sokolov, after he retires. Ogarkov, like Gorbachev, believes in high technology and the use of electronics in warfare. He may prove to be a challenge for the Reagan Administration's Strategic Defence Initiative (SDI) or Star Wars programme.

Earlier Gorbachev replaced veteran Foreign Minister, Andrei Gromyko, with Edward Shevardnadze, who made his international debut at the meeting of 35 heads of state at Helsinki for the tenth anniversary of the signing of the final act of the Conference on Security and Co-operation in Europe (CSCE). In the military field he made some more changes. The Soviet Commander in East Germany, Mikhail Zaitsev, was replaced by the former commander of the military district, that includes Moscow, Gen Pyotr Lushev. Gen Alexei Lizichev is said to have been promoted as chief political commissar of the Soviet Armed Forces in place of Gen Alexei Yopishev, who held the post for 23 years. The Commander of the Soviet missile forces, Marshal Vladimir Tolubko, has also been replaced. According to Western analysts, the military shake-up signifies that Gorbachev is willing to use talented, aggressive people like Ogarkov in the armed forces to make them more modern and effective.

In another surprising development, the Soviet Union unilaterally declared a moratorium on nuclear blasts from Aug 6 till the new year. Gorbachev timed the beginning of the moratorium with the 40th anniversary of the dropping of the atom bomb on Hiroshima. The US dismissed the unilateral declaration as a propaganda play and the State

Department expressed the view that it was quite meaningless because adequate techniques of neutral verification had not been worked out. Actually, the US needs fresh tests to develop its Star Wars weapons and, therefore, matching the Russian announcement with a similar one is out of question for the Americans.

OAU

SPREADING THE MESSAGE

The summit meeting of the Organisation Of African Unity (OAU) was cancelled in 1982, delayed in 1983 and saw a walk-out by two countries in 1984. This year, remarkably, the leaders met in a more cordial atmosphere in Ethiopia. Although the problems of Chad and Western Sahara, which had disrupted the earlier meetings, still persist, the main issue which affects a large number of African countries is the question of supplying food to Africa's starving millions. The leaders were optimistic and drew out a plan to make Africa self-sufficient in food in five-years time. The flaw in this plan was that very few details were disclosed, and there is speculation in Western circles that it may follow the path of the abandoned Lagos plan of 1980, which called for self-sufficiency in food production and the establishment of an African common market by 2000 A.D. The United Nations Economic Commission (UNEC) for Africa, which met the delegates of the summit before the meeting, has estimated that at least one-fourth of the government spending of the affected countries should be set aside for agriculture. However, most of the countries divert a lot of their resources to defence and to urban food subsidies because they are politically unstable and would at least like to keep the politically troublesome urban population happy.

Another major issue before the summit was Africa's \$170b foreign debt. On this opinions varied. Col Mengistu of Ethiopia blamed the creditors for exploiting the less-developed countries and said that African debts had multiplied as a result of falling world prices for African commodities, cuts in development aid, rising international rates and the protectionist policies of some of the developed states. On the other hand, President Nyerere of Tanzania was more conciliatory and called for an international conference of Western states, African countries and international lending institutions, to work towards a solution. The OAU summit also asked the creditors to waive some debts and ease the repayment term on others. Meanwhile concern over Africa's food shortage has spread all over the world. In July, the Live Aid Foundation organised a 16-hour high-tech teleconcert of rock music which was broadcast live through satellite all over the world. It helped to raise an estimated \$70m for the African famine victims. The moving spirits behind it were Bob Geldof, an Irish rock musician, oil baron T. A. Krishnan, and Michael Mitchell, an executive who had helped stage the 1984 Los Angeles Olympics. The money which has been raised will be

BBC BLACKS OUT

Protesting against the government and the BBC Governor's decision to cancel a 45-minute programme on Northern Ireland, a staff of 300 journalists and a large majority of other BBC staff, including technicians, started a 24-hour blackout from midnight Aug 6, 1985, on both BBC TV and radio. This strike is supported by other TV and radio stations across the country and is the first of its kind in the 50-year-old BBC history.

The Home Secretary, Leon Briten justified the ban on the programme on the ground that it profiled an extremist Sinn Fein leader who had openly propogated the arms struggle against Britain. Hence, to allow such programmes would amount to giving publicity to the cult of violence. The home secretary's action was described as an attempt to impose censorship on the BBC, which enjoys the reputation of being an autonomous body.

In fact the Khalistan movement leaders, mainly Jagjit Singh Chauhan, were given extensive coverage before and after the late Indian PM Mrs Gandhi's assassination. The British Government, even on repeated appeals from the Indian embassy did not take action, claiming that they had no say in the BBC broadcasts. Now, when they are faced with a similar situation a ban has been imposed through the decision of the BBC Governor.

The Board of Governors which is appointed by the government has come in for severe criticism for succumbing to the pressures of the government and over riding the management's decision.

used to purchase food and supplies which will be distributed through established relief agencies. Trucks and vehicles will also be brought to transport food that is already rotting in godowns in African ports. Much of the money will also be used for long-term agricultural development projects to prevent a recurrence of the African tragedy.

MEXICO POLLS

SPRINGING SURPRISES

When Mexico went to the polls in July to elect 300 national deputies, seven governors and a large number of state legislators, attention was riveted on the states of Sonora and Nuevo Leon (which have long been Opposition strongholds),— specially on the former state, where the Opposition National Action Party (PAN) had fielded Adalberto Rosas Lopez, who enjoyed a substantial edge in most opinion polls, for the gubernatorial post. However, as the Mexicans found out as soon as the election results started coming in, it was not so easy to defeat the ruling Institutional Revolutionary Party (PRI), which has enjoyed a virtual monopoly of political power ever since its founding in 1929. Since then, it has elected every Mexican President, filled every Senate seat and held the governorships of all 31 Mexican states.

What was extraordinary, however, was the margin of PRI victory in many instances, for example, 1,000 to 20, 1,800 to 70. In two districts of Rosas' hometown, the PRI won by 400 to 0 and 320 to 0. Although President Miguel de la Madrid Hurtado had promised honest and fair elections, the opposition party suspected vote fraud. As Rosas pointed out, despite the favourable opinion polls, it appeared that even his relatives had not voted for him. PAN collected evidences of voting irregularities and announced plans to seek a court order annulling the Sonora and Nuevo Leon results. PAN had ample evidence: for instance, the party's poll watchers were banned in hundreds of districts, opposition mayoral candidates in Sonora were not listed in 18 out of the 69 municipalities and in one instance, dozens of PAN supporters with valid voting cards were told that they were not on the registration lists. PAN loyalists were naturally upset and there were a few major instances of violence.

Although the PRI has apparently won a resounding victory, the government faces a major economic problem. Mexico had to cut the price of its crude oil, which earns 70% of its foreign exchange, to try to salvage its share of the world market. The peso has declined further and the exchange rate is now 335 pesos to the dollar in Mexico city. When President de la Madrid came to power, he had pledged to pull up Mexico's staggering economy, but so far his vision of a better economy is still a dream.

SOUTH KOREA

GROWING UNREST

The general elections held in February in South Korea appeared promising. President Chun Doo Hwan released political opponents from jail, withdrew the police from university campuses and allowed a much larger degree of freedom to the Press. However, after the elections demonstrations became common in Seoul, and there were big strikes at the textile firm—Daewoo Apparel!—and a car manufacturing firm—Daewoo Motor. In May, some students occupied an American library claiming that the Americans had conspired with President Chun during his bloody repression of an uprising in Kwangju, in 1980.

This was the last straw and the government clamped down on students and trade unionists and warned journalists and politicians to watch their steps. The police went back to the campuses and 56 members of a radical student group called Sammintu were arrested on the grounds that the group was communist, was responsible for the occupation of the library and for stirring up labour disputes. President Chun also dismissed his justice minister and the head of Seoul National University for being too soft.

The President probably adopted a liberal stance after the February elections, on pressure from the US, and because the Opposition New Korea Democrats, who now hold 101 of the 206 parliamentary seats, did very well at the polls. He perhaps hoped that the Opposition would fall apart if he released the rival Opposition leaders Kim Dae Jung and Kim Young Sam from jail. However, so far they have kept politics above rivalry and the Opposition is as strong as ever. In fact, Chun may soon find it difficult to crush criticism totally. Because of his educational reforms, South Korea has a large percentage of students going into universities. The economy, however, is slowing down and jobs are

becoming fewer. Consequently the country may soon face a youth unemployment problem which will lead to a further radicalisation of the youth.

PHILIPPINES

ANOTHER WATERGATE

The latest scandal involving Filipino President Ferdinand Marcos and his wife, Imelda, began in the US when a Californian newspaper, the San Jose Mercury News published a series of articles linking Imelda Marcos and several top aides like Chief of Staff Gen Fabian Ver (who is contesting charges that he participated in the cover up of the plot to kill Opposition leader Benigno Aquino) and Energy Minister, Geronimo Velasco, with the purchase of tens of millions of dollars worth of property from Los Angeles to Long Island in America. It charged that Imelda has been doing real-estate transactions and business through agents, representatives and nominees. The scandal has shaken the President's credibility further and has been compared to Nixon's Watergate.

Newspapers in Manila reprinted the articles and Filipino Opposition leaders have now got further ammunition in their hands. Presidential aspirant Salvador Laurel accused the government of moral bankruptcy and promised that the Opposition is going to hit hard on this. Marcos, on his part, denied the charge that he was building up a nest egg in America while his government ran up a foreign debt of \$26.5b. When Information Minister, Francisco Tatad discussed the real estate issues in his newspaper column, Marcos ordered him to be charged on a five-year corruption complaint. He has also asked his justice minister to launch an inquiry, which the Opposition expects will be directed more against them than at the President.

The scandal has come at a time when Manila's relations with Washington have touched a new low. Recently the US House of Representatives voted to cut US aid to Manila by \$15m next year and to divert \$75m from military to economic spending. Actually, such measures are intended to pressurise Marcos into calling fresh elections and clearing up the military. Marcos has promised to reinstate Ver if he is acquitted, but the US wants the Acting Chief of Staff, Lt Gen Fidel Ramos, who is reputed to be a military reformist, to remain in office. In response to the House of Representatives vote, Marcos wanted that if there was any aid cutback, he may abrogate the agreement between the US and the Philippines, allowing the former to use Subic Bay and Clark Air Field in the Philippines as military bases. The Defence Minister, Enrile, wanted to end the agreement with immediate effect but Marcos asked the Philippine National Assembly to study whether to re-negotiate the accord or to abrogate it. The Filipino threat has obviously worried the Americans and according to some sources, the US House will compromise and hold the line at \$40 in military aid. A tougher question is whether bankers abroad will be ready to give more loans to the Philippines. They are worried about the extent of capital flight at a time when the Marcos government has built up a multi-billion dollar foreign debt.

EUREKA

TO COUNTER STAR WARS

The Eureka (European Research Coordination Agency) idea was launched last April by the French President, Francois Mitterrand, partly to counter President Reagan's Strategic Defence Initiative (SDI or, more popularly, Star Wars) which aims at a space-based missile system. The difference between the two programmes is that while the SDI is a military programme developed by the US alone, Eureka is a high-tech civilian programme, which is mainly directed at consumer products, although its research can also be applied in the military field. Initially West Germany and Britain were skeptical about the French initiative and the Americans dismissed it as a "French ploy". But there has definitely been a change of heart of late and Eureka is off the ground.

Foreign and research ministers of the ten European Community countries, plus Spain, Portugal, Austria, Switzerland, Norway, Sweden and Finland as well as Jacques Delors, the President of the European Commission met in July in Paris to launch the project which is expected to bring in a golden era of West European research and technology. Mitterrand announced an initial French Government contribution of 1b French francs (\$116m), and West German Research and Technology Minister, Heinz Riesenhuber, declared that Bonn would probably give 300m marks (\$106m) for the project. Some other countries, too, have promised grants.

The general feeling is that while no single country can compete with the US in high technology by itself, European countries, if they band

together, can do so successfully. Eureka aims at developing a broad range of advanced technologies including software engineering, high-definition television, mobile communications, laser technology and advanced robotics. Many European multinationals have become interested in similar projects. Britain's General Electric Company, Netherlands Philips, France's Thomson and West Germany's Siemens have announced a \$1b project to do research on microprocessors, high density memory chips and microwave components. Many other companies, too, have decided on similar research projects. Some, like France's Aerospatiale and West Germany's Messerschmitt-Bolkow-Blohm, have also decided to join Eureka research in space, aeronautics and computer guided design. Others, like Italy's Fiat, will participate both in the SDI and the Eureka projects. The Americans, too, have become interested and there is speculation that the US may establish a liaison office with the European project.

OPEC

FROM CRISIS TO CRISIS

The Organisation of Petroleum Exporting Countries (OPEC) is struggling from crisis to crisis. The oil ministers of the 13-member nations met in quick succession at Vienna and Geneva in July, and although an unstable compromise was worked out at Geneva, the issue was far from settled.

The main problem is the reluctance of some member countries to stick to the cartel's pricing and production structure. Discounts are being given by them especially after the end of the British miners' strike, in March, reduced the world demand for fuel oil. To counter the trend, Saudi Arabia threatened to flood the market with 9m barrels per day, by the end of the year, which would result in a further plunge in price and affect all oil economies. Saudi Arabia is now restricting its oil production to 2.2m barrels a day, which is about half its 4.3m barrels-a-day production quota, to keep oil prices stable. As a result, it is running the world's second biggest current account deficit, after the US. At Vienna
(Continued on page 60)

THE DAY AFTER

Date : Aug 6, 1945
Time : 8.15 a.m.
Place : Hiroshima

Event : U.S B-29 Bomber "Enola gay" dropped the first operational nuclear bomb in the history of mankind killing about 80,000 people outright with more than 14,000 people dying subsequently of radiation effects. The citizens of the world had the first taste of the techno-ethnic cult which now dominates human civilisation.

The 2,00,000-plus innocent victims, their pain and agony seem to have been forgotten, as even 40 years after this nightmare, nations of the world are piling up more and more nuclear weapons amounting to a monumental global defence expenditure of roughly \$1.5b a day or \$2m every minute—this at a time when millions of people are dying of hunger and poverty in the less fortunate countries of the world.

It is upto the two superpowers to put an end to this ominous nuclear threat that humanity is facing. An agreement on disarmament at the superpower level is imperative.

The Soviet leader Mikhail Gorbachov, denouncing the Aug 6, 1945 bombing, accused the US of committing 'a crime that cannot be justified or forgiven' and appealed to the US to join hands with USSR in halting nuclear tests: In the past few months there has been a flicker of interest in the US camp. All hopes rest on the forthcoming summit between President Reagan and General Secretary Gorbachov to be held later this year.

Japanese PM Yasuhiro Nakasone, speaking at a prayer ceremony in the Peace Memorial Park on Aug 6, 1985, reasserted his country's stand on nuclear weapons and pledged to work for the ultimate abolition of nuclear weapons and to adhere to the three non-nuclear principles. Japan is the only non-nuclear nation in the world, which is against the manufacture, possession or entry into the country of nuclear weapons. The Mayor of Hiroshima, Takeshi Araki, a survivor of the atomic bomb himself, appealed to the superpowers to speed up disarmament talks, to work towards total abolition of nuclear weapons and demilitarisation of space, for, in the words of Pope John Paul II "Hiroshima is a living witness to what can happen but need not and should not happen."

ILA SRIVASTAVA

CAREERS

R&D SCIENTISTS

Research and development activities, for modernising India's defence capabilities, have opened up an exciting career path for young engineers. An insight into the world of R & D scientists working in various defence research labs in the country.

An engineer's constructive skills, a researcher's passion to know the unknown and a patriot's grit to defend the country. These basic potentials go to make up the R & D scientists working with a network of 44 defence research laboratories in the country. Their vocation is challenging and the opportunities rewarding.

The Defence Research and Development Organisation (DRDO), Ministry of Defence, undertakes research and development projects through its laboratories to meet the diverse defence needs of all the three services—the Army, the Navy and the Air Force. R & D in such sophisticated areas as lasers, solid devices, radar electronics, warfare systems, communications, computer software, artificial intelligence, instrumentation, missile technology, underwater acoustics, software engineering, operations research, etc are being embarked upon from time to time.

The defence research laboratories equipped with excellent R & D facilities are speckled all over the country—New Delhi, Chandigarh, Manali, Dehradun, Kanpur, Jodhpur, Bengal, Hyderabad, Pune, Bombay, Vizag, Cochin, Avadi, Bangalore, Madras etc. The scientists working in these laboratories have the stimulating opportunity to carry out basic and fundamental research specific to (a) the defence requirements of the country and (b) indigenisation of imported components.

The scientists, for example, are developing equipment and processed food to be used by our soldiers guarding the national frontiers at high altitudes. They have also researched into the development of gun and weaponry systems to suit the country's topographical needs—deserts, snowy mountains or marshy soil.

Earlier, 15 to 20 years back the majority of defence equipment (and spares) in use were being imported. Today with consistent and continued efforts of the scientists working in the R & D defence laboratories, the dependence on import has reduced considerably and they are

participating in the exciting responsibility of developing major defence hardware systems such as combat aircrafts, battle tanks, missile radars etc.

The DRDO has now marched along its way successfully towards advanced defence research by inducting bright, young engineers and science graduates directly from universities and technical institutions. They have also recruited Service officers with technical qualifications who provide the feedback of their actual experience with the weapons, material systems and stores. This helps the scientists to be in touch with specific needs in the vital area of defence research.

Recruitment

Until recently the appointment of Scientist 'B' (the basic level of induction into DRDO) was through the UPSC. Since 1985 the DRDO boards have autonomy in matters of recruitment of scientists as it was found that technological innovation could bear better results if preceded by technical orientation in the respective fields of specialisation. The direct recruits were found to be rather too raw to carry out advanced research activities. From 1985, exhaustive training is to be imparted in wide ranging areas of recruitment like Aeronautics, Computer Software, Electronics, Mechanical Engineering, Metallurgy, Naval Architecture, Applied Mathematics, Applied Optics, Instrumentation, Oceanography, Agriculture, Botany, Zoology and Civil Engineering.

This year DRDO has commenced its training programmes with a one-year Fellowship Programme in Electronics. An applicant for this programme needs to be a postgraduate in Physics with specialisation in Electronics or a graduate in Electronics Engineering with aptitude for research and development. Selection will be done on the basis of a qualifying test and interview following which he will have to undergo intensive training at the Institute of Armament Technology, Pune. During the training period he will be entitled to a consolidated stipend of Rs 1,200 per month and a House Rent allowance of Rs 190, in case hostel accommodation is not provided for.

The future of those who successfully complete the training is ensured. They would be placed in one of the laboratories/establishments as Scientist 'B' in an attractive scale of Rs 700-1,300 alongwith additional perquisites of accommodation, advance increments (for exceptionally bright candidates) and medical facilities.

The total emoluments initially would be around Rs 2,000 per month. However, they will be under a contractual obligation to serve the DRDO for a minimum period of three years after completion of training.

Prospects

The R & D scientist working with the DRDO can go several steps up the promotional ladder provided he has the enterprise, motivation and drive to forge ahead to higher levels of responsibility. Unmatched avenues for professional advancement are open in the Scientist 'C' grade (Rs 1,100-1,600), Scientist 'D' grade (1,500-2,000), Scientist 'E' grade (1,800-2,250), Scientist 'F' grade (2,000-2,500) and Scientist 'G' grade (2,500-3,000). The recently evolved Defence Research and Development Service Rules permit scientists to be assessed for promotion to the next higher grade within three to five years of service in any particular grade regardless of the vacancy positions.

And finally for those who look out for incentives in the vital area of professional growth, the DRDO laboratories have extensive and expensive experimental facilities for development of skills in sophisticated areas of research. Opportunities are also open for deputation abroad for specialising in advanced technologies. There is also a provision to grant leave to motivated scientists to pursue advanced research studies while in service.

With all this plus the thrill of a stimulating career why would an aspiring young science graduate ever dream of 'opportunities' abroad?

P.G.

ON GOLDEN POND

If the wild geese and swans of East Germany (GDR) could speak, they would probably have heartily endorsed the GDR scientists' claim that water birds in their highly industrialised country enjoy good living conditions and are well looked after. These beautiful, elegant birds are to be seen floating gracefully in their pristine glory on the surface of countless well-maintained ponds throughout the length and breadth of the country.

Needless to say, a good deal of effort has gone into making GDR a haven for water birds. And the rationale behind this has been that nature will be more suitable for human use where aquatic birds find good living conditions. By virtue of their large or small-scale propagation, these birds, ringed and marked with coloured plastic collars bearing coded data, prove to be an effective indicator of the pollution load of the environment and thus tell when, where and how the potentialities of nature should be used economically.

The GDR's endeavours in water birds research to harmonise the requirements of agriculture, freshwater fishing and nature conservation are, therefore, worth emulating. Indians, please note!

CAREER COUNSELLING

BY G. J. UNNITHAN, Director, Students Advisory Bureau, University of Rajasthan

I am interested in Rehabilitation Sciences/ techniques of the physically handicapped, particularly for the blind. What are the basic qualifications needed for pursuing a career in Rehabilitation and which institution in India offers specialisation in this branch?

Pratulla Hazarika, Dibrugarh

Kindly contact the Director, National Institute for the Visually Handicapped, 116 Rajpur Road, Dehra Dun-248 001.

I am an Arts graduate and wish to do English shorthand through postal coaching. Is there any standard institution providing this course?

D.G. Rajyaguru, Gondal (Gujarat)

Please contact The British Institutes, 72/B 12, P.O. Box 1025; 359 D.N. Road, Bombay-400 023 for a free copy of their prospectus while mentioning the subject.

I have appeared in the stenography test after qualifying the written test of Grade D Stenographers Exam 1984 conducted by the Staff Selection Commission on Oct 22, 1984. Till now I have not received any intimation from their end, nor could I find the result in any publication.

Veerji Fotadar, Beagam, (Kashmir)

Please go through the back issues of *Employment News*, which will be available at the nearest Employment Exchange, to find out whether the results of the exam have been announced. If these are not contained in *Employment News* you may assume that the results have not been declared.

My brother is studying in 1st year B.Sc. (Education) in Mysore. The course is conducted by NCERT. What are the career prospects of this course? Is he eligible for applying for B.E. in the Indian Institute of Science, Bangalore and also B.Tech. in MIT, Madras?

T.C. Raghuvir, Tiruchirappalli

B.Sc. (Education) is a 4-year professional course for science teachers. Advanced M.Sc. (Education) courses are also available at the Regional College of Education, Mysore. The Indian Institute of Science, Bangalore and the Anna University (includes MIT), Madras require candidates to have B.Sc. (Physics, Chemistry, Mathematics) for B.Tech. courses. The B.Sc. (Education) course is not listed as an eligible course for admission, but you may refer to the institutions concerned.

I shall shortly be finishing my schooling as per 10+2+3 pattern of C.B.S.E. I am interested in Physiotherapy. Kindly tell me what I should do.

Aruna Deshpande, Bhilai

Only a limited number of regular courses are available in Physiotherapy, namely B.Sc. courses at the All India Institute of Physical Medicine and Rehabilitation, Bombay 400 034 and Madras Medical College, Madras. Diploma courses are available at Patna Medical College: SMS Medical College, Jaipur; Physio-Occupational Therapy Institute, Deen Dayal Upadhyaya Marg, New Delhi; Christian Medical College, Ludhiana and at certain hospitals.

Is there any entrance test for admission to the Armed Forces Engineering College, Kirkee? If so, when is it held? How can the form and prospectus be obtained? Is there any scope for Automobile Architecture in India?

Amitav Mishra, Bhubaneswar

There is no direct admission to the Armed Forces Engineering College, Kirkee. Young men with requisite qualifications who are already recruited in the armed forces are sent there for training.

Automobile Design (not Architecture) is a part of the diploma/degree course in Automobile Engineering. There are a limited number of Automobile Engineering courses in India. The minimum admission requirement is Hr.Sec./10+2 with Science and Mathematics.

I have done M.Sc. (Mathematics) with high 2nd class marks and now I am employed in a Central Government department. Is it possible for me to carry on research work for Ph.D.? Is there any Indian university which conducts programmes for Ph.D. through correspondence?

Bhagabat Mandal, Nadia (W.B.)

There is no bar on employed persons with required qualifications to register for Ph. D. in most universities. The universities may, however, require that the scholar spends a minimum period of 2 months per year on the campus. You may contact the head of the department of your alma mater for details. There are no correspondence courses for Ph.D.

I am a post-graduate in Archaeology from Patna University. I am interested in water archaeology. What will I have

to do if I want to work in this field?

Anil Kumar Verma, Patna

As yet, there are no specialised courses in the field of Marine Archaeology. Candidates with considerable field experience in Archaeology will probably be considered for projects in Marine Archaeology.

I am a class XII Science student with Maths as my main subject. I want to do graduation in Science and pursue higher studies in Astrophysics. Which institutes in India have good facilities for this and what are the job and research prospects for an astrophysicist in India and abroad?

Shyam Jaisinghani, Bhopal

After your graduation with Physics and Maths, preferably B.Sc. (Hons) Physics, you may seek admission to the M.Sc. course in the Centre of Advanced Study in Astronomy and Astrophysics, Osmania University, Hyderabad or Punjab University, Patiala. Excellent research facilities in Astrophysics are available at the Tata Institute of Fundamental Research, Bombay and the Indian Institute of Science, Bangalore.

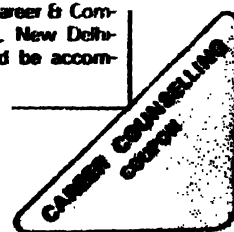
We would like some information on management trainees. What are the necessary qualifications and which firms recruit them?

Madhuri & Renu, Jalandhar

Several of the bigger industrial houses and public sector companies regularly advertise for management trainees. They invite technical graduates, M.B.A.s, C.A.s and postgraduates in Economics, Commerce and related subjects to apply. Smaller private companies as also some of the giants like DCM and JK advertise for graduates as management trainees, but these have a more limited scope than the technically qualified and postgraduates.

NOTE TO READERS

Before rushing in your career problem, check if it can be solved by looking up our sections on *Careers* or *Career Counselling* in the earlier issues. Space is limited; the mail received staggering. Letters chosen are those of general interest or in particular cases where the information is hard to find or has not been published before. Many readers ask for a personal reply. Sorry, this is not possible. So please don't send postage or envelopes. Make your queries specific and brief. Send them to Career Counselling, Career & Competition Times, 10 Daryaganj, New Delhi-110 002. Your letters should be accompanied by the coupon.



SPACE

LAUNCHING INTO THE VOID

BY DR SHIV PRASAD KOSTA

In 1610, Kepler wrote : "Let us create vessels and sails adjusted to the heavenly ether and men will present themselves who are unafraid of the boundless voids." What followed is the unfolding of the history of modern astronomy and space technology. In a six-part serial, let's follow step-by-step the development of rocket technology, the launching of space probes, manned space flights, development of satellites, the advent of the space transportation system, various applications of satellites and the space scene in India.



Until 1543, man thought that earth was stationary and every commonly known celestial object like the sun, the moon and the planets revolved around the earth. But in 1543, Nicolaus Copernicus (1473-1543) established that the Earth, Mercury, Mars, Jupiter, Saturn, etc revolved around the sun. Galileo, who discovered the sun spots and the moons of Jupiter, emphasised that the earth was not the sole centre of motion in the universe. The basic law of planetary motion, formulated by Johannes Kepler (1571-1630) established the fact that the planets moved in elliptical orbit around the sun. Sir Isaac Newton (1642-1727) propounded the Universal Law of Gravitation. These were the scientific discoveries that laid the foundations for modern astronomy and space technology.

In 1610, Kepler wrote: "There will certainly be no lack of human pioneers when we have mastered the art of soaring. Let us create vessels and sails adjusted to the heavenly ether and men will present themselves who are unafraid of the boundless voids. In the meantime, we shall prepare for the brave sky travellers, maps of the celestial bodies—I shall do it for the Moon and you, Galileo, for Jupiter." Similarly Dr Robert H. Goddard wrote : "It is difficult to say what is impossible, for the dream of

yesterday is the hope of today and the reality of tomorrow."

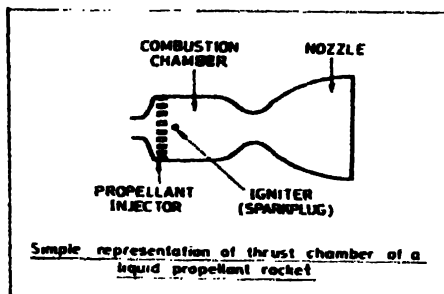
While turning the pages of space history, it will be found that the Chinese fired 'fire arrows' somewhere around 1232 A.D. Later, in 1792, Tipu Sultan successfully demonstrated the effective use of 'fire arrows' against the British Army at Srirangapatnam of the erstwhile Mysore dominion. This prompted the British to work hard and develop rockets based on Tipu's idea. In 1865, Jules Verne, the illustrious prodigy in science fiction, wrote his book *Earth To Moon* and followed it up

with the story *Around The Moon* in 1872. His writings had a sound, scientific basis and were so exciting to read that they amused, inspired and stimulated innumerable people over the years including the great space pioneers Konstantin Tsiolkovsky of USSR, Robert Goddard of USA and Hermann Oberth of Germany; all three acknowledged the influence of Verne's writings in their scientific work.

Konstantin Eduardovich Tsiolkovsky (1857-1935), who was considered an eccentric dreamer, worked out for the first time the theoretical solutions for the scope of projectiles from the earth's atmosphere and gravitational field. In fact, it can emphatically be stated that if space age was born anywhere, it was in the rooms of Tsiolkovsky's timber house in the town of Kaluga, south-west of Moscow, where he worked out the above-mentioned theoretical concepts. In 1895, he mentioned for the first time the possibility of artificial

ROCKET PROPULSION

(Basic Concept)



In its very essentials, a rocket engine consists of a combustion chamber, a nozzle and an exhaust exit. The propellant is injected into the combustion chamber, ignited and the exhaust ejected at high velocity, producing a forward thrust of the rocket system. There are basically two kinds of propellants—mono-propellants and bi-propellants. In the case of a mono propellant like hydrogen peroxide it is made to decompose in the presence of a catalyst to produce the exhaust gas. Such propellants are only rarely used as in the case of midcourse correction. Under bi-propellant systems which consist of a fuel and an oxidiser, we have the solid and liquid propellants. A typical example of a solid propellant is a mixture of cellulose nitrate and nitro-glycerin converted into fine grains and packed into the

combustion chamber. The burning surface of the solid propellant is so arranged that it produces optimum thrust. In the case of liquid propellants the typical fuels used are kerosene, alcohol and hydrogen and the oxidisers are oxygen, fluorine and nitrogen tetroxide. It is simple to see that for forward propulsion the ratio of the total thrust developed by the rocket to the total weight should be greater than 1; in the case of multistage rockets, the first stage usually has this ratio between 1.5 and 2. Another important parameter associated with the effectiveness of a rocket is its specific impulse (I_{sp}) which is defined as

$$I_{sp} = \frac{\text{thrust in kg}}{\text{kg of propellant burnt per second}}$$

It is thus seen that I_{sp} has the dimension of time and is expressed in seconds. We also have $I_{sp} = (V_e/g)$ where V_e is the velocity of exhaust and $V_e = \sqrt{T}$ where T is the fuel burning temperature. While specific impulse, which is the effectiveness of the propellant to produce rocket thrust, is the deciding factor in rockets used for getting out of the earth's atmosphere and its gravitational field, for high speed travel in interplanetary space (and in future perhaps for interstellar travel) the velocity of the exhaust (and the corresponding temperature of fuel burning) is a crucial factor.

Countries Which Launched Satellites With Their Launchers

Country	Date of first launch	Satellite/Launcher	Weight of satellite (kg)
USSR	4.10.57	Sputnik-1/Vostok	83
USA	31.1.58	Explorer-1/Jupiter	15
France	1.11.65	Astrix-1/Diomet A	80
Japan	11.2.70	Ohsumi/Lambda-45	24
China	24.4.70	Long March-1/CSL-1	173
UK	28.10.71	Bospetu	66
India	17.7.80	Rohini/SLV-3	40

satellites. In *Dream Of The Earth And The Sky*, published from Moscow, he wrote: "The fancied satellite of the Earth would be something like a moon, but arbitrarily closer to our planet—only far enough to be outside its atmosphere, that is, at a distance of some 300 versts." It is amazing that Tsiolkovsky, as early as 1903, described a rocket motor using liquid hydrogen and oxygen; he also put forward the idea of multiple rockets to overcome the disadvantages of a single-stage rocket.

Goddard (1882-1945) also independently reached theoretical conclusions similar to those of Tsiolkovsky, though ten years later. However, he followed up his theoretical work with many experiments. In 1926, he launched the first-ever liquid-fuelled rocket from a farm in Massachusetts, USA.

In Germany, interest in rocket research found expression in the founding of the Society for Space Travel in 1927. Unaware of Goddard's success in launching a liquid-fuelled rocket, Winkler, one of the members of the society, fired a similar rocket successfully in 1931. Subsequently, the activities of the society reached a low ebb till 1942 when Werner Von Braun, who joined the society in 1929, fired a rocket which attained a height of 50 miles and a distance of 120 miles. Hitler, impressed by the test, immediately ordered top priority to the project which led to the development of the world's first ballistic missiles, the V-2 rockets (V for vengeance) which were used against England across the Channel in 1944. The V-2 rockets used liquid oxygen and alcohol mixture and carried a warhead of about 2,000 pounds.

In 1952, the International Commission of Scientific Union (ICSU) decided to observe 1957-58 as the International Geo-physical Year (IGY) which later became the inaugural year of space exploration. In July 1955, President Eisenhower announced the decision of the

IGY. This was followed by an identical declaration by the USSR. The two superpowers worked hard and the USSR took the lead by launching on Oct 4, 1957, SPUTNIK-1, which weighed 83 kg. On Nov 3, 1957, SPUTNIK-2 with Laika, the dog aboard it, was launched. On Jan 31, 1958, America launched Explorer-1 successfully into the earth's orbit using a four-stage rocket, 'Jupiter'.

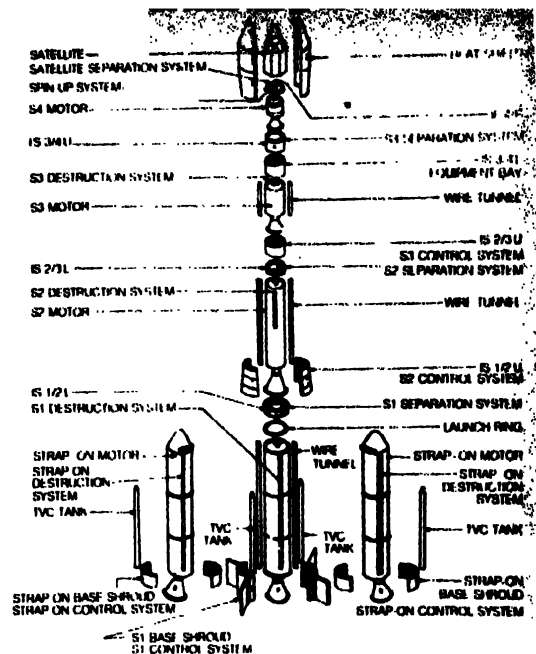
K. Tsiolkovsky many years ago expressed his conviction that man's ultimate destiny lay among the stars—the universe. Deep space probes were aimed at sampling the fields and particles of the interplanetary medium free from the earth's influence. Pioneer-5, the first interplanetary probe was launched on Mar 11, 1960 into an elliptical orbit just inside the earth's circular orbit. Later, the Pioneer spacecraft series was resumed in 1965 to

World's Space Launch Centres

Name	Country
Vandenberg AFB	USA (West Coast)
Wallops Island	USA (East Coast)
Kennedy Space Centre	USA (Florida)
Baikonur Cosmodrome	USSR
Volgograd Station	USSR
Northern Cosmodrome	USSR
OTRAG (German Company)	Libya
OTRAG (German Company)	Zaire
Guiana Space Centre	French Guiana
San Marco Platform	Italy
Sriharikota	India (Andhra Pradesh)
Shuang-Cheng-tze (Each Wind Centre)	China
Osaki Launch Centre	Japan
Kogoshima Space Centre	Japan

continue studies of interplanetary space from widely separated locations both inside and outside the earth's orbit.

President Eisenhower, on Jul 29, 1958, laid the foundation stone of National Aeronautics and Space Administration (NASA) for space science and technology. On Apr 12, 1961 USSR pressed on their initial advantage by making the first manned space flight in which Yuri Gagarin made a single orbit round the earth in Vostok-1. Valentina Tereshkova flew in Vostok-6 in June 1963; she com-



Technical sub systems details of the Indian ASLV.

pleted 48 revolutions of the earth, a feat which no woman has yet equalled or surpassed. President Kennedy announced on May 25, 1961 the goal to put man on the moon before the end of the decade. On Jul 29, 1969, Neil Armstrong of USA became the first man to put his feet on the moon.

One of the greatest milestones in manned space flight, and an event that evoked worldwide acclaim, was the July 1975 link-up of a Soviet and an American spacecraft in earth orbit (225 km), a fraternisation the mass media was quick to dub as 'Handshake In Orbit'.

The advent of the reusable Space Shuttle Transportation System (SSTS), a cost-benefit approach to space operations by USA, marks another important landmark of the space age during 1975-82. It was also during the same period that the first space-shuttle Columbia was launched from Kennedy Space Centre on Apr 12, 1981.

(To be continued)

About the author: Dr Kosta is Deputy Director at ISRO Satellite Centre, Bangalore, Group Director of the Spacecraft Electronics Group of the Centre and Director of the Publications and Public Relations Unit of ISRO. He has been and is still actively engaged in R & D programmes of ISRO and also in exploring the possibilities of using nature for the benefit of man. He pioneered the idea of using plants and trees for transmission and reception of electromagnetic waves—generating electricity from trees (1984) and receiving television signals from trees (1983).



AN AUTHOR-BUREAUCRAT



Who ever said that writing was not the bureaucrat's cup of tea? P.S. Bhatnagar, currently Administrator, New Delhi Municipal Committee, has the rare distinction of having authored the book *Zoramthangi: Daughter Of The Hills*. What's more? He is even planning his next novel. Talking to Y.C. MALAN and JYOTSNA SHARMA, Bhatnagar reveals the secret of his success in his dual responsibility.

The combination of bureaucrat and writer in one person is difficult to come by. However, P.S. Bhatnagar, currently Administrator of the New Delhi Municipal Committee incorporates these varied dimensions into his personality. Belonging to the rare genre of 'intellectual bureaucrats' he is an IAS officer and author of *Zoramthangi: Daughter Of The Hills*—a realistic portrayal of life in Mizoram.

Reading Habits

An avid reader himself, Bhatnagar strongly feels that reading contributes to overall personality development. It has helped him perform his various functions as a bureaucrat more effectively. Firstly, reading has helped him develop a sensitivity to various issues which facilitates considering situations from a humane point of view. Says Bhatnagar: "You no longer handle a file like a file. It represents a person's life and you take your decisions accordingly." Secondly, reading has helped him judge people better which is a great asset.

According to Bhatnagar, a bureaucrat is one who, can view a situation from both sides and weigh the pros and cons before taking a decision. In books a given situation is invariably viewed from

various angles and therefore reading helps to assess situations in real life from both sides too.

Despite holding a demanding position in the bureaucracy, Bhatnagar is a voracious reader. Twenty years in the Indian Administrative Services (IAS) haven't dulled his appetite for reading. How does he find time for literary pursuits? Says Bhatnagar: "It is always the busy persons who find time for pursuits despite their multifarious activities. Normally people spend a good part of their time in fruitless activities. However, here some sacrifices have to be made. You have to minimise socialising, cut down on sleep." He devotes about four hours a day to reading which includes two hours in the night as he feels that at this time there are no limitations on reading.

He started reading a book a day since the age of 15. And as a student he was meticulous about preparing notes when reading different books. His favourite author then was Thomas Hardy. However, now he has no particular preferences and reads anything he can lay his hands on—magazines and newspapers mainly.

What prompted him to write a book himself? The main motivation, according to Bhatnagar, was the conspicuous lack of knowledge and information among the masses about the state of Mizoram. He felt the necessity to educate the people "in an interesting yet informative way" and therefore chose the medium of story writing. This, plus the need to give vent to his urge for writing. At the moment he is busy planning his next novel which will deal with the issue of generation gap.

Bhatnagar confesses that an extremely understanding atmosphere at home has helped him cultivate his hobbies of reading and writing. Even as a child, he explains, he was not required to do any household chores or errands. And as a married man he is fortunate to have an understanding wife and children. With the result that despite the long hours spent in office, he is able to devote time to his literary pursuits.

Being a lover of books, however, does not classify Bhatnagar as a 'book worm'. As a student he devoted considerable time to sports—playing cricket and badminton on a night court.

The Bureaucrat

Hailing from Hissar and bred in UP, Bhatnagar received his education in Delhi, Durrani and Kanpur. The son of a doctor, he had nurtured the ambition of joining the Administrative Services since the age of 15. However, his first job after completion of Masters in English Literature was that of a clerk. It was here

that he realised the Services offered a wider variety of work, involving imagination and dynamism. Also, the IAS, according to Bhatnagar, is a prestigious and well-paid service.

An IAS officer of Union territory cadre for the past 20 years, he feels that the charm of working in the Services has grown over the years owing to the challenges the job offers. He even views political interference as a challenge though he feels that in a democracy, the chosen representatives of the people have the right to guide bureaucrats and lay down the general pattern of work. On the issue of IAS officers being subjected to frequent transfers, Bhatnagar feels that these should be accepted as part of the job and taken in the stride rather than viewed as harassments.

The new officers being recruited into the Services are bright, enthusiastic and eager youngsters. The standard of the Services is, according to Bhatnagar, being maintained and conflicting reports have not dulled the idealism of young IAS officers.

Advice For Young Aspirants

Intellect and determination, Bhatnagar feels, are essential for success in any sphere of life. These, coupled with hard work, are the key to a successful personality.

P.S. Bhatnagar has recently been appointed Delhi's Sales Tax Commissioner.

MIZORAM'S CHILDREN



Paramod Bhatnagar tells his tale in perhaps too simple a style. *Zoramthangi: Daughter Of The Hills*, his maiden attempt at writing, demonstrates this fact all too clearly. His hesitant grappling with words, the spas-

modic, uneven flow of the story leave much to be desired. But what really goes to the author's credit is the obvious knowledge he has of the remote jay hill state of Mizoram and the workings of the Mizo underground. Bhatnagar has based his book on his own experiences of Mizoram and has presented this in the form of a poignant story which, book readable, at least, is downable.

EDUCATION

WAKING UP TO THE PITFALLS

BY AMRIK SINGH, Former Secretary, Association of Indian Universities

A new educational policy for our country is in the offing. Unless the policy is framed in the light of our social and economic constraints, it would remain a futile exercise.

A constructive education policy is the need of the hour. In his first address to the nation, PM Rajiv Gandhi rightly identified education as the area where new initiative was called for. During the last few months, the subject has been hotly debated upon. The Ministry of Education is also preparing a set of proposals, the draft report of which would then be publicly discussed. The policy is likely to be finalised by the end of the year to be implemented from the next academic year.

The steps taken so far are in the right direction. But one assumption that can be questioned is that the educational policy can be framed without reference to the economic policies of the country. It can be put somewhat differently. Planning includes much more than economic planning. Every new Plan indicates how the country is to be developed. Every Plan document, in that sense, lays down a strategy for development. A progressive educational policy drawn in a social and economic vacuum will not be practicable. The policy would either remain on paper or would fail at the implementation stage. For, education is directly linked with national progress and an educational policy without reference to the strategy of development would remain a futile exercise. The crux of the matter is that education is a sub-system of the whole system and unless it changes, no major changes are possible in the sub-system.

If this line of argument is accepted, it should be clear why we have not achieved 100% literacy in the country. Illiteracy is closely linked with poverty elimination. Having failed on the poverty front, we also failed on the literacy front. Now the question is, how do we go about removing illiteracy? The experience of various countries in the last 50 years shows that illiteracy has been eliminated only through mass mobilisation. In other words, the school system has been expanded to take

care of the growing children. When they grow up, they grow up as literates and not as illiterates. But adults also need to be motivated to make themselves literate. Their motivation comes basically from the fact that in the process of educating themselves their poverty is also eradicated.

How far are we likely to succeed in this battle? We can succeed if we modify the strategy of development in such a way that poverty is wiped off and mass mobilisation is accepted as a pre-condition for success. People must be encouraged to learn. Illiteracy was overcome in North Vietnam even as the country was fighting a bloody and prolonged war with the US.

Primary education, the lynchpin of the educational system, has two problems—poverty and paucity of teachers and schools. The national drop-out rate is approximately 60% because of withdrawal of children of poor parents from schools. The parents either find it difficult to keep the children at school or find it profitable to use them as wage-earners or as helping hands in the family. For example, boys can be asked to tend the cattle and girls can look after their younger brothers and sisters. Besides, in India, approximately 40% of the schools are one-teacher schools. Obviously the teacher is unable to exercise proper control over all the children and the absence of a child for days or weeks together is not considered a serious problem. The country spends about 3% of its gross national product (GNP) on education. The Education Commission in 1968 assumed an expenditure of 6% of the GNP on education. This, however, has not happened and may not happen. This is a question of priorities.

The weakest link in the educational chain is the secondary stage—lower as well as higher. The higher secondary level was sought to be strengthened with the introduction of the plus two stage. An attempt was also made to vocationalise education at that stage. The effort so far has not been particularly successful. However, we would like to comment on the quality of teachers on whom the effectiveness of education depends. Unfortunately, the general quality of teachers is so poor that their teaching is not effective. This could be attributed to their low social status or low monetary gains. The future prospects for a schoolteacher being almost nil he lacks commitment and interest in his career. With the result the

children lose interest in school.

In advanced countries not many people go to colleges or universities. A clerk in a bank, for instance, is someone who has finished school. In our country hardly anybody would be considered for a bank job unless he has graduated. Obviously, knowledge imparted at the school level is unsatisfactory. Any effort towards betterment has to be directed to training and motivation at the postgraduate level.

Out of approximately 3m undergraduate students, only half a million or so are truly and genuinely interested in higher education. The rest are there because they have nowhere else to go. Were the organised sector of the economy working better and generating more jobs, young boys and girls passing out from school would be able to find jobs for themselves. Today they cannot. Why? One, because they are not properly trained and, two, because the number of jobs available is limited.

If the rush in colleges is to be avoided, more jobs will have to be created at the middle level for which appropriate kind of training will have to be given at the school level. Jobs, however, are scarce at all levels. Students, when unable to get jobs, feel that there is nothing wrong in continuing with further studies. Every family cannot afford college education for its children. In such a situation, students have no choice except to enter the job market at an early age and hope for the best.

An important aspect of higher education is the fee structure. The tuition fee, except for one or two states, is more or less what it used to be three or four decades ago though the cost of everything has risen enormously. Buildings, books and equipment cost very much more, and salaries of both teaching and non-teaching staff have also gone up. Consequently, the percentage of fee collection has come down to about 12% of the total expenditure which was 20% in 1950-51. A group of educationists, therefore, demands that tuition fees be raised.

In a society where only 20% of the students at the universities are motivated, the remaining 80% can refuse to pay even this very low tuition fee. They can go to the extent of saying that they are doing a favour to society by attending college even though they know that it is not useful to them. In a way, they are obliging the rest of us by agreeing to be in colleges; it keeps them out of mischief. Imagine a situation when more than 2m students are let loose with nothing to do. With their abundant and reckless energy they could turn things upside down. I still believe, as I did in 1973, that it is a fallacy to imagine that we are imparting education in our educational institutions. Quite a few of them are "baby-sitting" creches. ■

DATA INTERPRETATION

BY M N GUPTA

The ability to render complex information into tangible figures and graphs is a great asset to any administrator. The aim of data interpretation tests is to assess that ability in future administrators. If your schedule for the coming months includes the CIVIL SERVICES (MAINS), then here's your chance to brush up on data interpretation.

Problem-1

Show the given data in the form of a table, so as to bring out clearly all the facts. Also, indicate the source and give a suitable title.

According to the census of Manufacturers Report, 1975, the John Smith Manufacturing Company employed 400 non-union and 1,250 union employees in 1971. Of these 220 were females of which 140 were non-union. In 1972, the number of union employees increased to 1,475 of which 1,300 were males. Of the 250 non-union employees 200 were males. In 1973, 1,700 employees were union members and 50 were non-union. Of all the employees in 1973, 250 were females of which 240 were union members. In 1974, the total number of employees was 2,000 of which 1% was non-union. Of all the employees in 1974, 300 were females of which only 5% were non-union.

pretation

Table

JOHN SMITH MANUFACTURING COMPANY
(Workers according to union membership and sex)

Year	Union members			Non-union members			Total		
	Males	Fe- males	Total	Males	Fe- males	Total	Males	Fe- males	Total
1971	1,170	80	1,250	260	140	400	1,430	220	1,650
1972	1,300	175	1,475	200	50	250	1,500	225	1,725
1973	1,480	240	1,700	40	10	50	1,500	250	1,750
1974	1,885	295	1,980	15	5	20	1,700	300	2,000

Problem-2

Tabulate the following information in a suitable form with proper rulings and headings.

The Annual Report of Ishapore Public Library reveals the following points regarding the reading habits of its members.

Out of a total 3,713 books issued to the members in the month of June 1981, 2,100 were fiction. The library had 467 members during the period and they were classified into five classes A, B, C, D and E. The number of members belonging to the first four classes were respectively 15, 176, 98 and 129, and the number of fiction issued to them were 103, 1,187, 647 and 58 respectively. Number of books, other than textbooks and fiction, issued to these four classes of members were respectively 4, 390, 217 and 341. Textbooks were issued only to members belonging to classes C, D and E and the number of textbooks issued to them were respectively 3, 317 and 160.

During the same period, 1,246 periodicals were issued. These included 396 technical journals of which 36 were issued to members of class B, 45 to class D and 315 to class E.

To members of classes B, C, D and E, the number of other journals issued were 419, 26, 231 and 99 respectively.

The report, however, showed an increase by 3.9% in the number of books issued over last month, though there was a

corresponding decrease by 6.1% in the number of periodicals issued to the members.

Interpretation

Table

ISHAPORE PUBLIC LIBRARY
(Annual Report on June 1983 on reading habits of its members)

	Class of members					This month (June)	Last month (May)
	A	B	C	D	E		
Total number of members	15	176	98	129	49 _a	467	
Books issued	103	1,187	647	58	105	2,100	2,021 _{a2}
Fiction	—	—	3	317	160	480	462 _{a3}
Textbooks	—	—	3	317	160	480	462 _{a3}
Other books	4	390	217	341	181	1,133 _a	1,091 _{a4}
Total books	107	1,577	867	716	446	3,713	3,574 _{a1}
Periodicals issued							
Technical	—	36	—	45	315	396	422 _{a2}
Others	75 _a	419	26	231	99	850 _c	905 _a
Total	75	455	26	276	414	1,246	1,327 _{a1}

Notes :

a = Total number of members = 467. Number of members belonging to class E = $467 - (15 + 176 + 98 + 129) = 49$

a = Total number of books (fiction, textbooks and other books) issued = 3,713. Total number of textbooks issued = $3 + 317 + 160 = 480$. Total number of fiction issued = 2,100. Total number of other books issued = $3,713 - (2,100 + 480) = 1,133$

c = Total number of periodicals (technical and other journals) issued = 1,246. Number of technical journals = 396. Number of other journals = $1,246 - 396 = 850$

d = Number of journals issued to class A = $850 - (419 + 26 + 231 + 99) = 75$

e = Figures for last month (May)

Books : Since it is reported that there is an increase of 3.9% in the number of books issued in June over the last month, we have

a1 = The total number of books issued in the last month = $3,713 \times \frac{100}{103.9} = 3,573.63 = 3,574$

a2 = The total number of fiction issued last month = $2,100 \times \frac{100}{103.9} = 2,021.17$ or 2,021

a3 = The total number of textbooks issued last month = $480 \times \frac{100}{103.9} = 461.98$ or 462

a4 = The total number of other books issued = $3,574 - (2,021 + 462) = 1,091$

Periodicals: Since a decrease of 6.1% is reported in the issue of periodicals in June over the last month, we have

n = The total number of periodicals issued last month = $1,246 \times \frac{100}{93.9} = 1,326.94$ or 1,327

a = The number of technical journals issued last month = $396 \times \frac{100}{93.9} = 421.72$ or 422

a = The number of other journals issued last month = $1,327 - 422 = 905$

Problem-3

The following information is given regarding investment on different heads under the Third Five Year Plan. Draw different types of diagrams that can be used to represent the data :

Item	Proposed investment (Rs crores)
1. Agriculture, minor irrigation and community development	1,475
2. Major and medium irrigation	640
3. Power	975
4. Village and small industries	435
5. Industries and minerals	2,500
6. Transport and communication	1,650
7. Social services	1,725
8. Inventories	800
Total	10,200

Interpretation

The above-mentioned information can be represented with the help of the Percentage Bar Diagram or Pie Diagram.

Percentage Bar Diagram

In this, different percentages for the purpose of diagram can be obtained as given in Table X.

PERCENTAGE BAR DIAGRAM

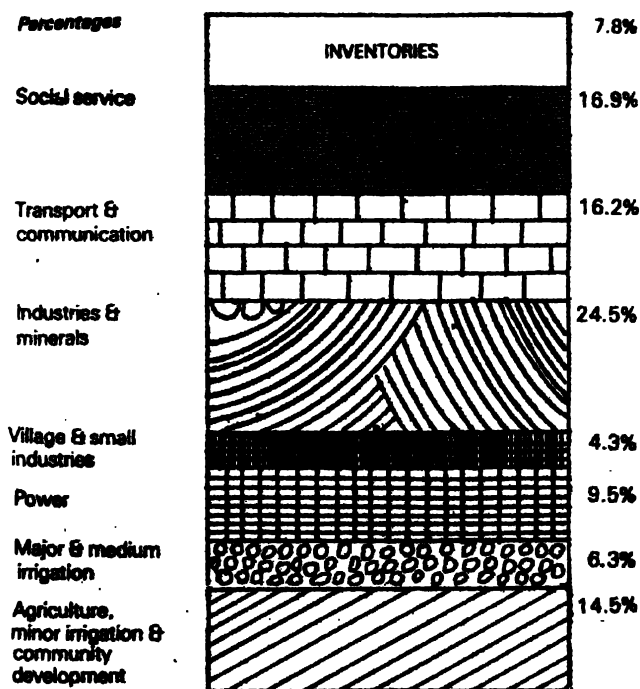


Table X

S. No.	Item	Calculations	Percentage investment
1.	Agriculture, minor irrigation and community development	$\frac{1,475 \times 100}{10,200}$	= 14.5
2.	Major and medium irrigation	$\frac{640 \times 100}{10,200}$	= 6.3
3.	Power	$\frac{975 \times 100}{10,200}$	= 9.5

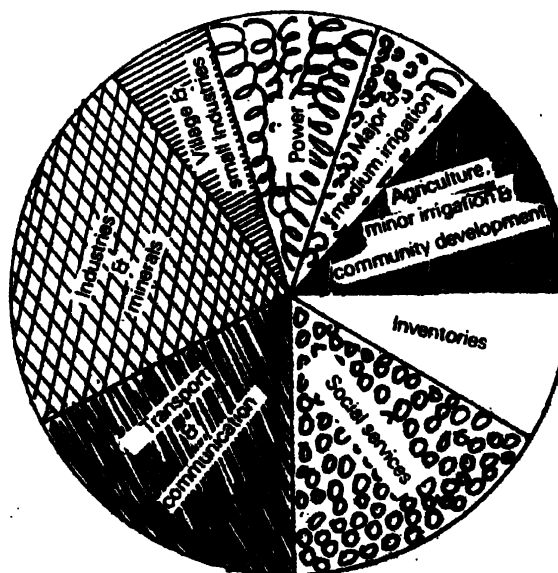
4. Village and small industries	$\frac{435 \times 100}{10,200}$	= 4.3
5. Industries and minerals	$\frac{2,500 \times 100}{10,200}$	= 24.5
6. Transport and communication	$\frac{1,650 \times 100}{10,200}$	= 16.2
7. Social services	$\frac{1,725 \times 100}{10,200}$	= 16.9
8. Inventories	$\frac{800 \times 100}{10,200}$	= 7.8
Total		= 100

Pie diagram

In this diagram, different angles that are to be used can be obtained as follows:

S. No.	Item	Calculations	Angle to be used (degrees)
1.	Agriculture, minor irrigation and community development	$\frac{1,475 \times 360^\circ}{10,200}$	= 52.2
2.	Major and medium irrigation	$\frac{640 \times 360^\circ}{10,200}$	= 22.7
3.	Power	$\frac{975 \times 360^\circ}{10,200}$	= 34.2
4.	Village and small industries	$\frac{435 \times 360^\circ}{10,200}$	= 15.5
5.	Industries and minerals	$\frac{2,500 \times 360^\circ}{10,200}$	= 88.2
6.	Transport and communication	$\frac{1,650 \times 360^\circ}{10,200}$	= 58.3
7.	Social services	$\frac{1,725 \times 360^\circ}{10,200}$	= 60.8
8.	Inventories	$\frac{800 \times 360^\circ}{10,200}$	= 28.1
Total			= 360

PIE DIAGRAM



Problem-4

The actual outlay on the public sector in the First and Third Five Year Plans of India is shown below by head of development:
(Continued on page 39)

HOW TO TACKLE CAT-1

BY EDGAR THORPE

Managers are not born. They are made. And for those who wish to tap their managerial abilities, under professional guidance, the Indian Institute of Management (IIM) is the answer. But there's the tough CAT which guards the IIM doors and needs a bit of taming. A four-part serial on how you can manage to bell the CAT and gain entry into the IIM.

The Common Admission Test (CAT) is a standardised test conducted by the Indian Institutes of Management (IIMs) for the selection of candidates for their Postgraduate Diploma in Management (PGDM) programme or by various university departments for their Master of Business Administration (M.B.A.) degree courses. CAT is intended to assist these institutions in assessing the candidate's mental skills vital to study the science of management. As the admission prerequisite for all courses is graduation in any discipline (Arts, Science, Agriculture, Commerce), these tests are not designed to test the candidate's ability and achievements in any specific academic field, viz. Science, Commerce, Economics, etc. but to measure the "general, verbal and mathematical abilities" and "analytical aptitudes". The purpose of a standard measure in these abilities is to permit the institutions to base their admission decisions on objective comparisons of all the candidates irrespective of their educational background and academic pursuits. They test the candidate's power of reasoning logically under stress. Thereby, time becomes the crucial factor to score high in CAT.

From the data collected from students who appeared for CAT (IIM), it is revealed that the whole paper is divided into seven sections as shown on facing page containing about 220 to 250 objective-type (multiple choice) questions to be answered in about 2 hours and 40 minutes.

What To Prepare

Having looked at the time schedule and format of the CAT question paper, you must have realised the scheme of the exam. While preparing for CAT you should keep in mind the various sections and the content of the syllabi which, no doubt, vary from university to university and institution to institution but there are certain common elements which are to be borne in mind in order to prepare thoroughly.

- Familiarity with the questions is an important asset for scoring high in CAT. For this purpose, go through the Practice

Tests that follow.

- Practise the art of answering questions under stress, paying attention to the time allowed for each section. This will help you save time which is very important in objective-type tests.

- Collect as much study material as possible based on the format given above. This will help you familiarise yourself with the material to be studied.

- In a CAT exam you have to score as high as possible in order to be selected. Thereby time management assumes importance. Make sure that you undertake the practice tests keeping in view the time constraints.

Time Management

This is an important requisite as in competitive exams there are a large number of questions to be answered in a limited time. From the first overall look at the question paper, you should be able to adjust your time by roughly dividing the time available between each question. The following technique will help you to budget your time:

- About 25% of the questions should be solved in less than 25% of the total time available; 50% of the questions in 50% of the time and so on.

- Do the easy questions first. This will help you save time for answering difficult questions.

- Answer all questions you know well and can answer with 100% accuracy.

- Meanwhile, focus your sub-conscious mind on the difficult questions you have left unattempted. Thus you may be able to find the answers without wasting your time.

- If you strike at the correct answer in the middle of the paper, return to the unat-

tempted question and solve it. Or from the time saved, you can go back to the unanswered questions towards the end just before revising your answer paper.

Pay Attention To Details

Read the instructions given at the beginning of the paper carefully. Then read the instructions given at the beginning of each question. Take note of words like some, almost, mostly, generally, all, best, etc. These are qualifying words and change the meaning of the questions.

Reject Wrong Answers

Objective-type questions have four to six answer choices and you have to select the correct one (sometimes two are also correct). If you are able to locate the correct answer immediately from the answer choice, there is no need to waste time thinking of other answers.

Rephrasing The Question

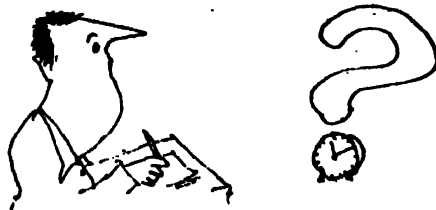
Questions based on true-false/valid-invalid/probably true/etc. involve a complete understanding of the subject area. The phrasing of such questions is very important. A statement to be chosen as true should be completely true and if false it should be completely false. Very often rephrasing of these questions might help in clearly understanding the meaning.

Vocabulary Building

To attempt the verbal section of CAT, you are expected to have a good vocabulary and an excellent command over word usage. It is not possible to memorise long lists of words with their meanings, spellings and usage. The following suggestions to enlarge your vocabulary should prove helpful:

Use a dictionary: If you come across a new word, make note of it and look for its meaning. Make a notebook wherein you can note down any new word you come across. Find out all the possible meanings of the word. This is the best way of enlarging your vocabulary gradually.

Make use of word lists: In some books you may find lists of words 'commonly mis-spelt'. Different books have such lists. Go through these and note the spellings of the words. Herein, such a list has been reproduced and the commonly



Time Schedule And Format Of CAT Question Paper

Section	Type of questions	No. of questions	Time (In minutes)
SECTION I			
Verbal Ability	Synonyms/Antonyms	20	
	Spellings/Fill in the blanks	20	
	One-word substitutes	5	
	Analogies	5	
		50	25

SECTION II			
Quantitative Ability	Basic Algebra &	10	
	Basic Arithmetic	10	
	Miscellaneous questions on quantitative ability	10	
		30	20

SECTION III			
Reading Comprehension	Three long passages followed by 20-25 questions on reading comprehension and basic grammar	20	
	Correct/incorrect sentences	10	
		30	25

SECTION IV			
Quantitative Aptitude	Percentages/fractions	5	
	Averages/Exponents &		
	Roots	5	
	Profit & loss/discount	5	
	Interest/ratio/proportion	5	
	Motion/speed/time/work	5	
	Age & miscellaneous	5	
		30	25

Section	Type of questions	No. of questions	Time (In minutes)
SECTION V			
Analytical Ability	Questions on data sufficiency	15	
	Arranging sentences in logical order & other miscellaneous questions	10	
		25	20

SECTION VI			
Analytical Ability	Passage on Business Situation & questions on:		
	Data evaluation	5	
	Problem solving	5	
	Data application	5	
	Managerial aptitude	5	
		20	25

SECTION VII			
Data Interpretation	Interpretation of data given in Graphs		
	Diagrams/Tables. Quick calculation questions	15	20
Total no. of questions & time allowed		200	160

NOTE: The format and time schedule is not always fixed. The above is based on debriefing by candidates who appeared in PGD&T (BBA) and MBA (of various Indian universities) in some papers load from the Verbal section is shifted to the Mathematical and Analytical Ability sections. The crucial element in such papers is time and it is essential that practice tests are tried under stress conditions.

confusing and mis-spelt letters have been underlined for convenience.

Cultivate a reading habit: Read as much as you can. If you get into this habit, your vocabulary will grow by leaps and bounds. Read all posters and ads in magazines. Here you will find several new words. Also make a careful note of their spellings. Sometimes the word is very familiar but you may not be able to spell it out properly.

Etymology learning: This is an important and interesting way of enlarging your vocabulary. A word, for example, consists of the following elements:

- **Prefixes**—letter combinations which appear at the beginning of words.
- **Root/Stems**—70% of which carry the basic meaning. This forms the main part of the word.
- **Suffixes**—Letter combination which appears at the end of the word.

Learn the roots (stems), prefixes and suffixes of every new word you come across, and you will be able to master the spellings and familiarise yourself with their meanings. Roots/stems are generally taken from Latin or Greek. Following are

some examples of word analysis:

Prefix	Meaning	Usage
Contra-	against	contrary/contradictory
Poly-	many/several	polygamous/polytheism
Post-	after	post-operative/postpone/post-mortem/postgraduate
Super-	above	supermarket/superimpose
In/im/Ii/Ir/Un	not	impossible/illegal/invalid/irregular/irrelevant/undesirable
Suffix	Meaning	Usage
-ment	result	filament/settlement/document/statement
-ious	full of	rebellious/religious
-action	action of	transaction/transcreation
-ary	relating to	elementary/rudimentary

Stems	Meaning	Usage
ject-	throw	inject/project/reject/eject
tele-	distance	telecommunication/television/telephone/telegraph/telepathy
phono-	sound	phonograms/telephones/phonography
hydr-	water	hydroscope/hydro-electric/dehydration
chromo-	colour	chromosome
cede	go	precede/supersede/proceed
gamous-	marriage	monogamous/polygamous

When you come across a word, analyse it in terms of its prefix/suffix and stem. With the help of the examples given above, analyse the word and you will soon find common elements in several words. This is the most scientific approach to develop word power. If you read a new

word somewhere, immediately look for its meaning and try to relate it with other words having the same prefix/suffix/stem configuration.

Recommended Books

- A good dictionary
- A good book on synonyms and antonyms, e.g., *Pitman Book Of Synonyms & Antonyms*, Indian edition published by A.H. Wheelers Pvt Limited; *Use The Right Word & Modern Guide To Synonyms* (a Reader's Digest

publication).

- For correct usage of words, *Words Misused And Confused* by Maurice H. Weseen, originally published by Pitmans. Indian edition available from A.H. Wheeler & Co Limited.

- For spelling rules, preposition usage, grammar, etc., *English Grammar, Composition & Correspondence* by Pink & Thomas.

- A book on GMAT, preferably an ARCO or BARRON publication (Eugene D. Jafee).

find five synonyms of the main word CONSUME. In fact, there are no exact synonyms—no exact meanings. This argument can be upheld if by 'meaning' we refer to the range of contexts in which a word may be used. Certainly there are no two words that are interchangeable in all the contexts in which either might appear. However, within a given context there are often exact synonyms. One more point to be noted is that words which are synonyms in one of their meanings may differ considerably in their other meanings.

Therefore, in such questions we have to look for the meaning which is nearly the same as the main/key word. If more than one answer choice corresponds to the meaning of the main word, select the one which is more *closely* related. For this you have to analyse the key/main word and its various meanings. Here again you have to bear in mind the part of speech, tense, different meanings, etc as already explained. The following illustrative examples should prove helpful:

Illustration I: Select the word or phrase which is *nearest in meaning* to the capitalised word :

AMBIGUOUS

- (a) Clear
- (b) Simple
- (c) Doubtful
- (d) Obvious
- (e) Equivocal

Answer : (c)

Illustration II: Select the word or phrase which is *not nearest in meaning* to the capitalised word :

DISORDERLY

- (a) Untidy
- (b) Indisciplined
- (c) Turbulent
- (d) Noisy
- (e) Disciplined

Answer : (e)

Illustration III: Select the word or phrase which is *most nearly opposite* in meaning to the capitalised word :

FLUTTER

- (a) Quivering
- (b) Agitation
- (c) Tumult
- (d) Confusion
- (e) Calm

Answer : (e)

Illustration IV: Select the word or phrase which is *not opposite* to the meaning of the capitalised word :

HALE

- (a) Healthy
- (b) Sound
- (c) Hearty
- (d) Weakly
- (e) Robust

Answer : (d)

Illustration V: Select the word or phrase which is *most nearly the same as* or the *opposite* of the capitalised words :

VERBAL ABILITY

Section I of CAT usually consists of the Verbal Ability test in which 35 to 40 questions are to be answered in 15-20 minutes. This section consists of questions on the following aspects of Verbal Ability:

Antonyms

An antonym is a word which is opposite in meaning to another word. For example, an antonym for Rich is Poor. In your Verbal section of the exam, you are given a key word printed in capitals following points may be borne in mind:

Your task is to select the word that comes closest to being opposite in meaning to the key word. To solve such questions, the following points may be borne in mind :

(a) Make a very careful note of the spellings, e.g., Proceed/Precede, Advice/Advise, etc. Try to read all the letters of the word before arriving at the right answer choice.

(b) When selecting the right antonym for the key word, make sure that both words (the key/main word and the answer choice) correspond in tense, e.g., present to present, past to past, etc. Note the following examples:

Main word	Corresponding Antonym
Diffusion	Concentration (not concentrate)
Harmony	Conflict (not conflicting)

(c) Sometimes you will find that at the first glance, the key word seems unknown to you. But after a second look you may realise that it is a familiar word, except that it is somewhat different in form because it is a different part of speech. Therefore, make sure that you compare noun with noun, adverb with adverb, etc. Otherwise

your choice won't be the exact opposite

Note the following examples :

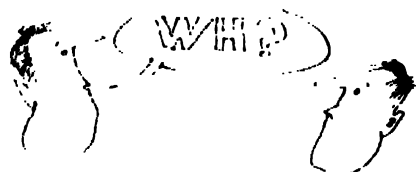
Main word	Corresponding Antonym
Consonant	Dissonant (both adjectives)
Corroboration	Invalidation (both nouns)
Concise	Wordy (both adjectives)
Concisely	Wordily (both adverbs)
(d) Words are of two types, viz, root words and derivatives. You must be aware of word formation and the change in the meanings of root words by addition of prefixes and suffixes. Hence, analyse the given word and the alternative answer choice. You will be able to find the exact word from the answer choice by such an analysis.	

(e) English language is very rich in synonyms. It may be possible that a particular word may have more than one meaning. Therefore, in case you are unable to find the correct word choice immediately, examine all the possible meanings (synonyms) of the word. This will help you to select the right choice. The point (e) above may be transformed into a formula for answering the antonyms.

Formula: Suppose word X is the key/main word for which the opposite word (antonym) has to be selected from the given choice. First, examine the synonyms (all alternative meanings) for the word X. For example, word X = DISSOLVE. The word dissolve has the following possible alternative meanings—to melt, to break up, to fade away, to waste away. Applying the above formula, DISSOLVE means 'melt' or 'break up', the opposite of which will be SOLIDIFY.

Synonyms

The second type of question in the Verbal section consists of selecting the right synonym. English language has the largest vocabulary and an equally large variety of synonyms compared to any language in the world. The synonymous words—words which convey more or less the same meaning can be substituted for a given word. E.g., CONSUME = destroy/exhaust/devour/spend/squander. Here we



ANALOGICAL RELATIONSHIPS



Type of relationship	Example	Explanation
1. Antonymous relationship	Slim : Stout Poor : Rich Never : Always	Opposite in meaning
2. Synonymous relationship	Slim : Thin Kind : Benevolent Stout : Portly	Similar in meaning
3. Cause & Effect relationship	Germ : Disease Mosquito : Malaria Insult : Humiliate	Action of the first word results in the effect of the second.
4. Worker & Article relationship	Author : Book Carpenter : Chair Cobbler : Shoe	
5. Worker & Tool relationship	Tailor : Sewing machine Surgeon : Forceps Writer : Pen	Tools used by various technicians.
6. Tool & Object relationship	Pen : Paper Saw : Wood Oven : Bread Brake : Car Knife : Meat Starter : Motor	Tools used on the object. Brakes stop the car. Knife cuts the meat. Starter starts the motor.
7. Whole & Part, Part & Whole, Part & Part relationships	Car : Wheel Coils : Motor Soldier : Regiment	Wheel is part of a car. Coil is part of a motor. Soldier is part of a regiment.
8. Degree of Difference relationship	Tap : Slam Nip : Crash Admiration : Love	Same meanings but difference in degree only.
9. Classification relationship	Cow : Mammal Ice : Water	Biological classification. Similarly there can be chemical/physical classification.
10. Functional relationship	Axe : Wood Scissors : Cloth General : Command	First term describes the function of the second.
11. Sex relationship	Man : Woman Male : Female Bull : Cow	
12. Time Sequence relationship	Morning : Evening Day : Night	First word meaning follows the second.
13. Finished product and raw material relationship	Flour : Bread Grape : Wine Fresh milk : Milk powder	
14. Symbolic relationship	Flag : Nation Insignia : Rank Stars : Rank	
15. Specialist and Subject relationship	Skin : Dermatologist Bone : Orthopaedist Heart : Cardiologist	
16. Numerical relationship	4 : 16 :: 5 : 25 ::	Multiplication relationship. Similarly there can be relationships of addition/subtraction/division.
17. Place relationship	Delhi : Red Fort Punjab : Ludhiana Chandigarh : Punjab	Red Fort is in Delhi. Ludhiana is in Punjab. Chandigarh is the capital of Punjab, etc.
18. Association relationship	Time : Clock Pen : Ink	Clock is associated with time. Similarly

(Continued on page 38)

1. WARRANTY

- (a) Threat
- (b) Guarantee
- (c) Order for arrest
- (d) Issue
- (e) Fund

2. VALEDICTORY

- (a) Bidding farewell
- (b) Sad
- (c) Collegiate
- (d) Derivative
- (e) Promising

Answers : 1. (a) 2. (a)

Analogy/Word Relationship

In such questions, the candidate is presented with a pair of words (usually in capitals) followed by five additional pairs of words, marked (a) to (e). The candidate is expected to select the pair of words from among the five choices (a-e) that best matches the relationship existing between the first two words.

The given pair of words is set off by a colon or ratio sign (:). The colon is merely a kind of code or symbol that *signifies that word A is related to word B*. The double colon (::) that separates the given pair from the five choices stands for 'in the same way that'. For example: DARK : LIGHT ::

- (a) Thin : Slim
- (b) Stout : Strong
- (c) Germs : Disease
- (d) Tree : Forest
- (e) Hot : Cold

In the above example, the answer is (e)—Hot : Cold. Because *Hot* is related to *Cold* in the same way as *Dark* to *Light*. In other words they have an antonymous relationship.

You are required to find the significant relationship between the second word of a given pair of words and find, 'among the choices offered' an analogous or similar relationship between each pair of words.

Solving of analogical questions can be made simple by following the pattern given below:

(a) Establish the relationship between the given pair before looking at the answer choices. After you have found the relationship look at the answer choices to find similar relationship among them.

(b) Base your final decision after going through all the answer choices.

(c) Note grammatical relationship for same part of speech/tense, etc. For instance, if a given pair consists of two words of the same part of speech (e.g., two nouns/ or two verbs), then in the answer choice also

(Continued from page 37)

Type of relationship	Example	Explanation
	Air Pressure : Barometer	other terms have a relationship.
19. Purpose relationship	Sand paper : Abrasion Oil : Lubrication	Sand paper is used for abrasion and oil for lubrication.
20. Age relationship	Boy : Man Cow : Calf	
21. Comparative relationship	Black : Coal Red : Blood	Examples used while comparing colour, etc.
22. Habit relationship	Meant : Non-vegetarian Buffalo : Herbivorous Lion : Carnivorous	Food habit relationship
23. Quantitative relationship	Kilogram : Gram Litre : Millilitre	
24. Qualitative relationship	Hot : Cold Big : Small	Can also be classified under antonyms.
25. Utility relationship	Chair : Sitting Bed : Sleeping Car : Driving	Relationship of the article to the purpose for which they are used.
26. Blood/family relationship	Father : Mother Brother : Sister	

the word pair should have the same relationship, i.e., both having the same part of speech.

The list of probable relationships (see pages 37-38) found in analogical questions should be helpful.

Spellings

The Verbal Ability section contains two types of questions on spellings.

Example 1: In the following set of words, one is wrongly spelt. Tick mark the incorrectly spelt word:

- (a) Athlete (b) Auxilliary
(c) Abscess (d) Agressor
(e) Catalogue

Answer : (b) The word auxiliary has only one T

Example 2 : Select the word correctly spelt out in the following alternative answer choices:

- (a) Acquaintence (b) Acquaintance
(c) Acquaintance (d) Acquentece
(d) Acquentece

Answer : (C)

To solve spelling questions follow the given strategy:

- Read the words in the answer choices very carefully.
- Note the instruction very carefully, whether the examiner is asking you for the 'correctly' or the 'incorrectly' spelt word.
- For practice purposes, follow the instructions/suggestions given in the section on 'How to build your vocabulary'.
- Given below is a list of commonly mis-spelt words. The important letters in the words are underlined. Note these words.

THE MIS-SPELT MANIA

A accommodation accordance
acknowledged

address
adjournment
advertisement
agreeable
alleviate
allotted
amelioration
antagonism
apparatus
archive
arithmetic
ascertain
B
beginning
believe
benefited
C
catalogue
challenge
circumstances
column
commissioner
committee
competent
complementary
concealment
conciliation
considerable
consignment
consistent
correspondent
D
defendant
definition
demurrage
denote
denoting
depreciation
depression
description
diaphragm
diarrhoea
dinner

dining
difference
discrepancy
dissatisfy
E
eligible
emigration
entanglement
entrance
enumeration
envelope
equipped
equipment
erroneously
excell
extension
F
fascinate
farming
foreseen
forfeit
fulfil
fulfilled
G
gazette
genuine
guarantee
H
heighten
hierarchy
honorary
I
inadvertent
inadvertency
independent
install
instalment
immense
immigration
increase
increment
irritation
itinerant

judgement
L
licence
literary
M
manageable
machinery
maintain
maintenance
maisonnette/maisonette
material
mathematics
manoeuvre
mileage
N
nuisance
O
occasion
occurring
occurred
omitted
P
passenger
plaintiff
politeness
privilege
procedure
Q
questionnaire

quoting
R
receive
receipt
recognised
recommend
referring
routine
S
sergeant
separate
session
severe
skilful
summon
superintendent
T
traffic
truly
tuition
tutor
U
unprecedented
unsolicited
V
vacant
vacuum
vicissitude
W
welcome

MENTAL (SLIP) ABILITY

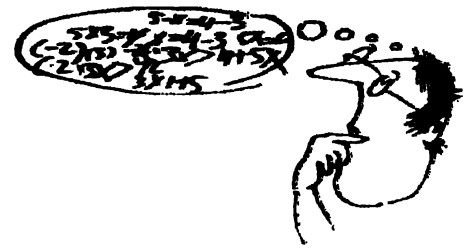
In **Non-Verbal Tests**—Multirelational Analogies—in *The Right Approach To Mental Ability And Quantitative Aptitude* (June '85) the Problem Figure should be marked 1, 2, 3, 4 and 5 while Answer Figure should be marked A, B, C, D, and E. Similarly in Series Completion the Problem Figure should be marked 1, 2, 3, 4 and 5 while the Answer Figure should be marked A, B, C, D and E.

In **Verbal Tests**—Jumbled letter relationship—read G N I K : K I N G instead of G N I K : KTNG and in Mixed Coding read "A 3 T 5 D" in place of "A 3 I 5 D". In Example 7 of Direction Tests substitute "left" for "right."

In **Quantitative Aptitude**—Table 1 read $25 = \frac{1}{4}$ " instead of $20 = \frac{1}{4}$ " Also the formula for interest calculation should read as $P + I_1/100 = I_1$
 $(P + I_1) = I_1/100 = I_2$
 $(P + I_1 + I_2) \times I_1/100 = I_3$

The steps for calculating compound interest in the problem—Calculate compound interest for 3 years on Rs 1,000 at 5% rate of interest per annum—should be
 $P = \text{Rs } 1,000$ $t = 3$ years $r = 5\%$ p.a
5% for 1st year Rs 1,000 (.05) = 50
5% for 2nd year Rs 1,050
Hence
5% for 2nd year Rs (1,050) (.05) = Rs 52.50
 $\text{Rs } 52.50 + \text{Rs } 1,050 = \text{Rs } 1,102.50$
For 3rd year I will be calculated on Rs 1,102.50 = Rs (1,102.50) (.05) = Rs 55.125 = Rs 55.13
Hence after three years P (Rs 1,000) will become Rs 1,157.63 or interest will be Rs 157.63 and not Rs 57.63.

QUANTITATIVE ABILITY



The second section of the CAT question paper deals with Quantitative Ability problems.

Algebraic Problems

Read accurately to ascertain what you are asked to find. This is very important as without proper understanding of the problem, no solution can be found. Be composed and don't be unduly hasty.

Use common sense and think carefully before tackling any problem. Every problem does not require elaborate calculations. Questions like: "Cost of 50 gm if 1 kg costs so much" do not need any rough calculations and if you have read the problem correctly and applied common sense, you are sure to strike at the right answer. Use formulae like $25 = 1/4$, $50 = 1/2$, etc.

Sometimes it is better to translate the problem into algebra. For example, 20 is what % of 10? Convert the problem into algebraic equation, e.g.,

$$20 = x\% \times 10$$

$$\text{or } 20 = \frac{x}{100} \times 10$$

$$\text{or } 20 = \frac{x}{10}$$

Multiplying both sides by 10
 $200 = x$.

Inequalities Manipulation

Addition and/or subtraction can be done from both sides of an inequality without changing the direction of the inequality. Similarly multiplication or division can be done from both sides of the inequality by any positive number and there will be no change in the direction of the equality. However, if a negative number is used for multiplication or division of an inequality, direction of the inequality has to be reversed. Note the following examples:

$$(a) \quad 3x > y + z$$

$$3x + 5 > y + z + 5$$

$$(b) \quad 4 > 3$$

$$(-2)(4) < (-2)(3)$$

$$-8 < -6$$

Equation Solving

In equation solving you have to determine the letter or the value/quantity you are asked to isolate. For instance, solving equation for x means getting it on one side of the = and everything else on the other side of =. For example:

$$5x + 3 = y$$

Subtract 3.

$$5x = y - 3$$

Divide by 5

$$x = \frac{y - 3}{5}$$

If x is to be expressed in terms of y, it means having an equation with x alone on one side of = and some expression of y on the other, such as $x = 4y^2 + 3y + 4$. If there are two variables in an equation, it is helpful to bring all expressions containing one variable on one side and all the others on the other.

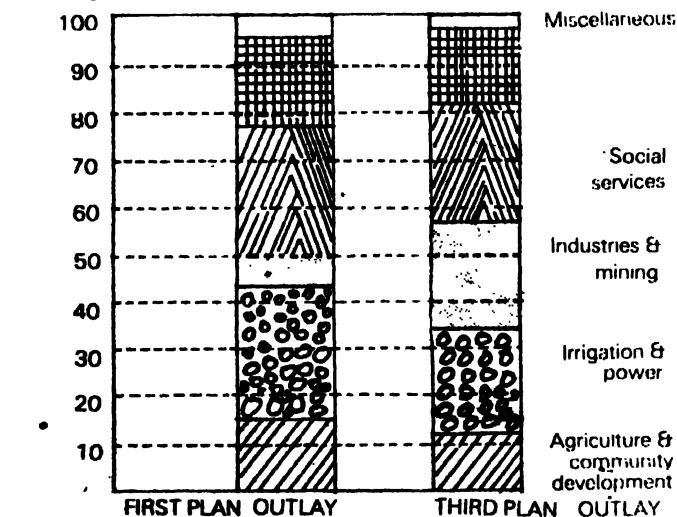
The most important point to be borne in mind here is that in algebraic fractions, we must divide the numerator and denominator by the same factor as is done in arithmetic. We should never cancel terms, as this would be adding or subtracting the same number from the numerator or denominator and will change the value of the fraction.

(To be continued)

DATA INTERPRETATION

(Continued from page 33)

Percentage



S. No.	Head of development	First Plan outlay (Rs crores)	Third Plan outlay (Rs crores)
1.	Agriculture and community development	290	1,096
2.	Irrigation and power	583	1,927
3.	Industries and mining	97	1,965
4.	Transport and communication	518	2,113
5.	Social services	412	1,422
6.	Miscellaneous	60	85
Total		1,960	8,608

Draw a suitable diagram that may attach relative importance to the various heads on each Plan. And make a comparison between the First and the Third Plan (same scale should be used).

Interpretation

For the above-mentioned problem, the suitable diagram would be the Percentage Bar Diagram. The percentage can be calculated as follows:

Table

S. No.	Head of development	First Plan outlay calculations	(Approx) Percentages	Third Plan outlay calculations	(Approx) Percentages
1.	Agriculture & community development	$\frac{290 \times 100}{1,960}$	14.8	$\frac{1,096 \times 100}{8,608}$	12.7
2.	Irrigation & power	$\frac{583 \times 100}{1,960}$	29.7	$\frac{1,927 \times 100}{8,608}$	22.4
3.	Industries & mining	$\frac{97 \times 100}{1,960}$	4.9	$\frac{1,965 \times 100}{8,608}$	22.8
4.	Transport & communication	$\frac{518 \times 100}{1,960}$	26.4	$\frac{2,113 \times 100}{8,608}$	24.6
5.	Social services	$\frac{412 \times 100}{1,960}$	21	$\frac{1,422 \times 100}{8,608}$	16.5
6.	Miscellaneous	$\frac{60 \times 100}{1,960}$	3.2	$\frac{85 \times 100}{8,608}$	9.8
Total			100		

Observing the diagrams, we can conclude that

● On the Third Plan, the actual outlay decreased as compared to the First Plan.

● The maximum emphasis was placed on industries and mining in the Third Plan as compared to the First Plan.

(To be continued)

Practice Tests

In preparing these tests, we have tried to visualise the questions you are likely to face in your actual exam. Great care has been taken to frame questions which are of the same standard as those you'll encounter in your exam.

Rating : Evaluate your performance on the basis of the following score-card:

- 100 questions in 60 minutes—Excellent
- 60 questions in 60 minutes—Good
- 50 questions in 60 minutes—Fair
- 35 questions in 60 minutes—Poor

Tips: 1. Do not waste time over questions you are not sure about. 2. Give the problems some thought before choosing the answers. 3. Read the directions carefully before answering the questions. 4. Do not try to guess the answer.

Verbal Ability

FOR CAT

Now that you are familiar with the preparation strategy for the Common Admission Test (CAT), get set to tackle these verbal, mathematical and analytical ability tests in order to sharpen your grey cells and train them for speedy action, under stress.

Time : 25 minutes

Scores : 1. Give yourself one mark for each correct answer. 2. Deduct one mark for each wrong answer.

Then rate yourself as follows:

Excellent... 45... 50 Very Good... 39-44... Good... 33-38

Fair... 27-32 Poor... Below 27

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the questions. Answers are given at the end of these tests.

Directions: In questions 1-10 select the word or phrase that is *nearest in meaning* to the word.

1. ABASH
 - (a) Lower
 - (b) Humiliate
 - (c) Embarrass
 - (d) Detest
 - (e) Depart
2. ACIDULOUS
 - (a) Vinegary
 - (b) Slightly sour
 - (c) Very sour
 - (d) Bitter
 - (e) None of the above
3. ABJURE
 - (a) Renounce
 - (b) Discuss
 - (c) Run away
 - (d) Unclaimed
 - (e) Perjure
4. BOISTEROUS
 - (a) Noisy
 - (b) Cloudy
 - (c) Grateful
 - (d) Conflicting
 - (e) Calm
5. CACOPHONY
 - (a) A type of dance

- (b) Discord
- (c) Applause
- (d) Special sound
- (e) A typical sound instrument
6. CONSTRUE
 - (a) Inform
 - (b) Advise
 - (c) Explain
 - (d) Promote
 - (e) Relief
7. PINNACLE
 - (a) Lean
 - (b) Peak
 - (c) Riding on motor-bike
 - (d) Taunt
 - (e) A typical game
8. CHICANERY
 - (a) A special flavour
 - (b) An aromatic plant
 - (c) Affluence
 - (d) Disinclined
 - (e) Trickery
9. VESTIGE
 - (a) Clothing
 - (b) Sound of a wind-mill
 - (c) Trace
 - (d) Sly
 - (e) Inactivity
10. EFFIGY

- (a) Proxy
- (b) Dummy
- (c) Doll like structure
- (d) None of the above

Directions : In questions 11-20 select the lettered word or phrase that comes closest to being *opposite in meaning* to the capitalised word.

11. INSIPIID
 - (a) Sour
 - (b) Tasteless
 - (c) Tasty
 - (d) Without flavour
 - (e) Silly
12. BLASE
 - (a) Fire
 - (b) Keen
 - (c) Worldly
 - (d) Hot
 - (e) Cold winds
13. COMPENDIOUS
 - (a) Inflated
 - (b) Large
 - (c) Profound
 - (d) Bigger
 - (e) None of the above
14. FECUND
 - (a) Pure
 - (b) Barren
 - (c) Young
 - (d) Sinister
 - (e) Impure
15. PRATE
 - (a) Unlawful copying of printed material
 - (b) Talk meaningfully
 - (c) Laugh loudly
 - (d) Remark hurriedly
 - (e) Fearful
16. SAVANT
 - (a) Gambler
 - (b) Deceiver
 - (c) Simpleton
 - (d) A type of plant
 - (e) None of the above
17. INTERDICT
 - (a) Dictate
 - (b) Apprehend
 - (c) Delegate

- (d) Sanction
(e) Dread
18. **PUISSANT**
(a) Clear
(b) Concise
(c) Lucid
(d) Brief
(e) Impotent
19. **DEXTEROUS**
(a) Without carbohydrate
(b) Sour taste
(c) Bitter
(d) Sinister
(e) Maladroit
20. **ANOMALOUS**
(a) Maculate
(b) Organised
(c) Regular
(d) Impertinent
(e) Coordinated

Directions : In questions 21-30, select the correct spellings from amongst the given alternatives.

21. (a) Questionare
(b) Questionnare
(c) Questionnair
(d) Questionnaire
22. (a) Continueous
(b) Continuous
(c) Continous
(d) Contineous
23. (a) Discrepency
(b) Discrepancy
(c) Descrepency
(d) Descrpency
24. (a) Accomodation
(b) Acommodation
(c) Accommodation
(d) Accamodation
25. (a) Seperate
(b) Separate
(c) Saparate
(d) Saperate
26. (a) Occurence
(b) Occurrence
(c) Occurrence
(d) Occurance
27. (a) Officous
(b) Officius
(c) Officious
(d) Officeous
28. (a) Omnisent
(b) Omniscient
(c) Omniscient
(d) Omniseint
29. (a) Envelop
(b) Envelope
(c) Envelap
(d) Envolep
30. (a) Ocasionally
(b) Occasionally
(c) Occassionly
(d) Ocassionally

Directions : In questions 31-35, choose the word which very closely replaces the given phrase or definition.

31. To be fond of sensuous enjoyment
(a) Hedonist
(b) Epicure
(c) Jockey
(d) Jolly
32. To close a meeting
(a) Convene
(b) Adjourn
(c) Terminate
(d) Postpone
(e) Alienate
33. A desire for knowledge
(a) Wish
(b) Longing
(c) Curiosity
(d) Craving
(e) Eagerness
34. Large-scale departure of people
(a) Migration
(b) Immigration
(c) Exodus
(d) Aberration
(e) Eagerness
35. Unfit for human consumption
(a) Uneatable
(b) Expired
(c) Inedible
(d) Opulent
(e) Non-consumable

Directions : In questions 36-45, select from the given alternative word(s)/ preposition(s) the word(s) which best fill(s) the blank(s) :

36. He was warned last summer that his _____ nature was dangerous for his cardiac disease.
(a) Fussy
(b) Choleric
(c) Chronic
(d) Capricious
(e) Chimerical
37. It is better to—the last paragraph in order to make the report more——.
(a) Concise . . . interesting
(b) Delete . . . succinct
(c) Review . . . worthy
(d) Expunge . . . witty
(e) Revise . . . abstruse
38. Although the committee members wanted to go home, no hope for an early _____ could be entertained.
(a) Postponement
(b) Compromise
(c) Adjournment
(d) Conciliation
(e) Adjustment
39. A person who is _____ cannot be bk med of being _____
(a) Glib . . . ribald
(b) Dexterous . . . gauche
(c) Impolite . . . shy
(d) Shy . . . partial
(e) Partial . . . shy
40. As we know that he is _____ we cannot predict what course he will follow.
(a) Sedate

- (b) Capricious
(c) Incoherent
(d) Over-intelligent
(e) Weak
41. Ram had to write a pronote _____ security _____ the loan secured by him.
(a) For, for
(b) Of, for
(c) For, of
(d) With, for
(e) With, of
42. Rakesh was trying to side _____ Joginder who is known _____ his bad behaviour.
(a) For, to
(b) With, by
(c) For, by
(d) By, for
(e) With, for
43. If you all agree, I will proceed _____ my lecture till lunch-break today.
(a) On
(b) With
(c) For
(d) Upon
(e) In
44. Nights in Delhi always remain alive _____ people on the roads.
(a) With
(b) By
(c) To
(d) For
(e) In
45. This is the right time to study the problem——all aspects.
(a) With
(b) By
(c) To
(d) From
(e) For

Directions : In questions 46-50, select the littered pair that expresses a relationship similar to that between the capitalised word-pair.

46. **EVANESCENT : TEMPORARY ::**
(a) Shining : Brief
(b) Laconic : Stationary
(c) Lethargic : Napping
(d) Ephemeral : Transient
47. **MILLIMETER : CENTIMETER ::**
(a) Large : Small
(b) Century : Decade
(c) Quart : Gallon
(d) Ten-rupee note : Hundred-rupee note
48. **BASEBALL : DIAMOND ::**
(a) Court : Badminton
(b) Football : Gridiron
(c) Court : Tennis
(d) Cricket : Bat
49. **SEDATIVE : PAIN ::**
(a) Narcotic : Oblivion
(b) Hypnotic : Sleep
(c) Solace : Grief
(d) Irritant : Eye

Quantitative Ability

FOR CAT

Now attempt these practice tests which require the ability to reason with numbers, using common sense as well as quick calculation techniques.

Time : 20 minutes

Scores : 1. Give yourself one mark for each correct answer. 2. Deduct one mark for each wrong answer.

Then rate yourself as follows

Excellent30-35 Very Good...24-29 Good...18-23 Fair...17-22 Poor... Below 17

DIRECTIONS : For each of the following questions, tick mark the choice that best answers the questions. Answers are given at the end of these tests.

- If $x = +5$, then $(x-8)(x+3)$ is
 - 24
 - 18
 - 24
 - 0
 - 18
- A class of 50 girls and 70 boys offered Economics. If 40% of the girls and 50% of the boys attended the Economics class, approximately what percentage attended the class?
 - 43
 - 46
 - 40
 - 41
 - 44
- Which of the following fractions is the smallest?
 - $1/2$
 - $6/17$
 - $7/12$
 - $7/8$
 - $8/9$
- Add $4x+2y$ to $x-4y$
 - $4x-2y$
 - $5x-2y$
 - $4x-4y$
 - $5x-4y$
 - $5x-6y$
- Divide $(8x^3-5x^2+2x)$ by $2x$
 - $3x^2-3x-1$
 - $3x^2-3x+1$
 - $3x^2-2x-1$
 - $3x^2-6x+1$
 - $3x^2-2x+1$
- Multiply $(2r-3)$ by (r^2-5rs)
 - $2r^3-1-r^2s-3r+15rs$
 - $2r^3-10r^2s-3r+15rs$
 - $2r^3-10r^2s-3r+15rs$
 - $2r^3-15rs$
 - $2r^3-10r^2s+15rs$
- Which of the following numbers has no predecessor but only a successor?
 - 1
 - 0
 - 2
 - 5
 - 10
- Which of the following are the first six prime numbers?
 - 1, 2, 3, 4, 5, 6
 - 3, 5, 6, 9, 11, 13
 - 2, 3, 5, 7, 11, 13
 - 2, 3, 5, 7, 9, 11
 - 2, 3, 5, 7, 11, 15
- Which of the following equations has a solution in rational numbers?
 - $x^2=25$
 - $x^2=9$
 - $\frac{5x}{3} + \frac{1}{2}$
 - $x^2=16$
 - $2x^2=14$
- Which is the smallest of the following?
 - $3\sqrt{3}$
 - $\frac{\sqrt{3}}{3}$
 - $\frac{1}{3}$
 - $\frac{1}{\sqrt{3}}$
- If x and y are two different real numbers and $rx=ry$, then r is
 - x/y
 - $\frac{x-y}{r}$
 - y/x
 - $\frac{x-y}{y}$
 - 0
- How many of the numbers between 100 and 300 begin with 2?
 - 2
 - 20
 - 180
 - 110
 - 100
- How many of the numbers between 100 and 300 end with 2?
 - 20
 - 120
 - 180
 - 10
 - 40
- Find the sum of $\frac{n}{6} + \frac{2n}{5}$
 - $17n$
 - $\frac{3n}{5}$
 - $\frac{3n}{30}$
 - $\frac{17n}{30}$
- If $x = 3$ and $(x-y)^2 = 4$, then y could be
 - 5
 - 8
 - 7
 - 0
 - None of the above
- Which of the following is the most convenient association you will adopt to find the product of $25 \times 73 \times 40 \times 10$?
 - $(25 \times 40) \times 73 \times 10$
 - $(25 \times 73) \times 40 \times 10$
 - $(73 \times 40) \times 25 \times 10$
 - $(25 \times 10) \times 40 \times 73$
 - $(73 \times 25) \times 40 \times 10$
- To find the sum of the numbers 45, 55, 77 and 23 which one of the following alternative pairs is most convenient?
 - $(45+77) + (55+23)$
 - $(45+55) + (77+23)$
 - $(55+77) + (45+23)$
 - $(77+45) + (23+55)$
 - $(55+23) + (77+45)$
- Sohan is 20 years older than his sister Lata. However, y years back, Sohan was twice as old as Lata. If Lata is now b years old and $b > y$, find the value of $b-y$.
 - 13
 - 15
 - 16
 - 20
 - 14
- In B.A. (Part I), three optional subjects are available, viz. Economics, Sociology and Public Administration. If $1/8$ th of the class offered Economics and $1/3$ rd offered Sociology, what percentage of the class would have opted for Public Administration?
 - 33
 - $1/4$
 - 47
 - 28
 - 50
- If a cyclist covers a distance of 88 feet in 4.5 seconds, what is his speed per mile/hour?
 - 20 miles/hour
 - 15 miles/hour
 - 12 miles/hour
 - 10 miles/hour
 - None of the above
- To compute $26 \times 3\frac{1}{2}$, which of the following may be used conveniently and correctly?
 - $(26 \times 1/2) + (20 \times 3) + (6 \times 3)$
 - $(26 \times 20) + (26 \times 1/2)$
 - $(20 \times 26) + (1/2 \times 26)$
 - $(20 \times 24) + (6 \times 3)$
 - None of the above
- 10^6 may be

- (a) 10×5 (b) $10^2 - 10^3$
 (c) $10 \times 10 \times 10 \times 10 \times 10$
 (d) $10^3 \div 10^2$
 (e) $5^2 \times 5^2$
23. $3\sqrt{-\frac{1}{4}}$ is equal to
 (a) -2 (b) -4
 (c) $1/2$ (d) $-1/4$
 (e) $1/4$
24. Mohan drives 522 km in 9 hours. Compute his average speed per hour.
 (a) 50 (b) 51
 (c) 52 (d) 53
 (e) 58
25. Suppose $5y = \frac{45}{y}$, then y is
 (a) -9 (b) +or-3
 (c) -6 (d) -3
 (e) +3
26. Strength of a school increased by 7.5% per year in the last two years. If the current strength is 73,960 students, two years back the strength should have been
 (a) 12,800 (b) 60,000
 (c) 6,400 (d) 65,000
 (e) 64,000
27. How many three-digit numbers can be secured by 0, 3 and 5 if not a single one of them is repeated in any number?
 (a) 5 (b) 8
 (c) 4 (d) 3
 (e) 7

28. Ram, Radha and Rakesh invested in a business Rs 9,000, Rs 5,000 and Rs 6,000, respectively. The profit made was contracted to be divided according to the ratio of their respective investments. If their firm makes a profit of Rs 825 and out of this Radha secures a loan of Rs 230 before computation of the final accounts, how much will she get after the close of the financial year?
 (a) Rs 32.50 (b) Rs 32
 (c) Rs 34 (d) Rs 38.50
 (e) Rs 34.80
29. Convert $4\frac{1}{2}$ to an improper fraction.
 (a) $14/3$ (b) $10/2$
 (c) $8/3$ (d) $12/2$
 (e) None of the above
30. After multiplying $17\frac{1}{2}$ by 128, the result is
 (a) $57\frac{1}{2}$ (b) $57\frac{1}{4}$
 (c) $57\frac{1}{8}$ (d) $57\frac{1}{16}$
 (e) None of the above
31. Rakesh has x number of electric fans out of which 14% are defective and need minor repairs. He gives 80% of the remainder to a temple, free of cost. He is now left with 253 fans. Calculate the value of x.
 (a) 1,000 (b) 1,800
 (c) 1,200 (d) 2,000

- (e) 1,500
32. The personnel strength of a company has increased @ 10% every one decade. The current strength = 48,400 employees. What was it two decades back?
 (a) 42,000 (b) 40,000
 (c) 48,000 (d) 30,000
 (e) None of the above
33. Simplify the following equation:

$$\frac{4}{7} + \frac{4}{7} \left(\frac{3}{4}\right)^2$$

$$\frac{4}{7} - \frac{3}{7}$$
 (a) 0 (b) 1.0
 (c) 2.0 (d) -1
 (e) 10
34. If $1/4$ kg of oil costs Rs 40, how much will 100 gms cost?
 (a) Rs 16 (b) Rs 8
 (c) Rs 4 (d) Rs 2
 (e) Rs 20
35. Puran has more bank balance than Sushma but less than Beant Singh. If the bank balance of Puran, Sushma and Beant Singh are x, y and z respectively, which of the following expressions is true?
 (a) $x < y < z$
 (b) $y < x < z$
 (c) $z < x < y$
 (d) $y < x < z$
 (e) $y < z < x$

E.T.

ANSWERS Verbal Ability

- | | | | | |
|---------|---------|---------|---------|---------|
| 1. (c) | 2. (b) | 3. (a) | 4. (a) | 5. (b) |
| 6. (c) | 7. (b) | 8. (e) | 9. (c) | 10. (b) |
| 11. (c) | 12. (b) | 13. (a) | 14. (b) | 15. (b) |
| 16. (c) | 17. (d) | 18. (e) | 19. (e) | 20. (c) |
| 21. (d) | 22. (b) | 23. (b) | 24. (c) | 25. (b) |
| 26. (c) | 27. (c) | 28. (c) | 29. (b) | 30. (b) |
| 31. (b) | 32. (b) | 33. (c) | 34. (c) | 35. (c) |
| 36. (b) | 37. (b) | 38. (c) | 39. (b) | 40. (b) |
| 41. (c) | 42. (e) | 43. (b) | 44. (a) | 45. (d) |
| 46. (d) | 47. (d) | 48. (b) | 49. (c) | 50. (b) |

Quantitative Ability

1. (c) Substitute the value +5 for x. $(+5 - 8) (+5 + 3) = (-3) (8) = -24$. Substitute before multiplication.
2. (b) $40\% = \frac{2}{5} \times 50 = 20$ girls attended
 $50\% = \frac{1}{2} \times 70 = 35$ boys attended
 55 total girls + boys attended
 $\frac{55}{50 + 70} = \frac{55}{120} = \frac{11}{24}$
 $= 45.8\% \text{ or } 46\%$
3. (b)
4. (b)
$$\begin{array}{r} 4x + 2y \\ +x - 4y \\ \hline 5x - 2y \end{array}$$

5. (e) $\frac{9x^2 - 6x + 3x}{3x} = \frac{9x^2}{3x} - \frac{6x}{3x} + \frac{3x}{3x}$
 $= 3x - 2 + 1$
6. (c) $(2r-3)(r^2-5rs) = 2r(r^2-5rs) - 3(r^2-5rs)$
 $= 2r^3 - 10r^2s - 3r^2 + 15rs$
7. (a) 1 is followed by 2 but there is no number coming before (preceding) it.
8. (c)
9. (e)
10. (a) $\frac{1}{3\sqrt{3}} = \frac{\sqrt{3}}{3 \cdot 3} = \frac{\sqrt{3}}{9} = \frac{1.73}{9} = 0.19$
 Whereas in other cases we get:
 $\frac{\sqrt{3}}{3} = \frac{1.73}{3} = 5.7$
 $1/3 = 0.33333$
 $\sqrt{3} = 1.73$
 $\frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3} = \frac{1.73}{3} = 0.57$
11. (e) Because r cannot equal any number other than 0. If we divide by r, x would equal y. Since $x \neq y$, it follows that $r = 0$
12. (e) All numbers from 200 to 299 begin with 2. There are 100 such numbers.
13. (c) All numbers like 102, 112—192 end with 2. There are 10 such numbers in this

(Continued on page 47)

Quantitative Aptitude

BY KAVITA KAPOOR & B.L. ARORA

FOR ASST'S GDE, CDSE, NDA, CLERKS' GDE EXAMS...

This section is designed to help those appearing in the forthcoming CDSE, Assistant's Grade, NDA and Clerks' Grade (Regional Recruitment Board) exams. And also forms an important part of the Maths paper for most other competitive exams.

DIRECTIONS: For each question tick mark the choice that best answers the question. Answers with explanations appear at the end of this test.

1. If $a/b = 3/4$, then $12a =$
(a) 16b (b) 9b
(c) 8b (d) 7.5b
2. Which of the following numbers is the smallest?
(a) $1/\sqrt{2}$ (b) $3/4$
(c) 0.78 (d) $7/9$
3. What should be added to the number 98765 to make it a perfect square?
(a) 7 (b) 6
(c) 5 (d) None of the above
4. The square of any odd number divided by 4 always gives a remainder of
(a) 1 (b) 2
(c) 3 (d) 1 or 3
5. 62½% of a number can be obtained by multiplying it with
(a) $9/11$ (b) $7/9$
(c) $5/8$ (d) $4/7$
6. If $\sqrt{11} = 3.316$, the value of $\sqrt{176}$ correct to two decimal places is
(a) 13.14 (b) 13.26
(c) 13.44 (d) 12.88
7. If $\sqrt{x} = .04$, x is equal to
(a) 0.2 (b) 0.02
(c) 0.0016 (d) 0.16
8. One third of a pole is in mud, one half is in water and 2 m is above water. The length of the pole in water is
(a) 1 m (b) 3 m
(c) 4.5 m (d) 6 m
9. A typist can finish a job in $2\frac{1}{2}$ hours. If she reduces her speed by 25%, in 3 hours what percentage of the job will remain unfinished?
(a) 4% (b) 7.5%
(c) 8% (d) 10%
10. The ages of four brothers are in the ratio 3:4:5:7. If the sum of their ages is 76, the age of the eldest brother is
(a) 24 (b) 28
(c) 30 (d) 36
11. The average temperature of five consecutive days is 32°C . If the average of the first three days is 29°C and the average of the last three days is 34°C , the temperature of the third day was
(a) 27°C (b) 29°C
(c) 30°C (d) 31.5°C
12. Out of four members of a family, the average age of the first three (youngest) members is 24 years and of the three eldest members is 27. If the age of the eldest member is 31, the age of youngest member is
(a) 17 years (b) 19 years
(c) 21 years (d) 22 years
13. The product of two numbers is 9576. If their H.C.F. is 21, their L.C.M. would be
(a) 426 (b) 456
(c) 201096 (d) Cannot be determined by using the given information
14. The L.C.M. of $4/7$, $5/14$ and $8/7$ is
(a) $5/7$ (b) $1\frac{7}{7}$
(c) $29/14$ (d) $40/7$
15. A shopkeeper increases the prices of the articles in his shop by 12% and then announces a sale at 25% discount. If his original profit margin was 25%, the profit he would now earn would be
(a) 5% (b) 4%
(c) 10% (d) 12%
16. If the cost of 15 pens is equal to the selling price of 12 pens, the profit percentage would be
(a) 20% (b) 25%
(c) 27.5% (d) 22.5%
17. It is not possible to have a triangle with sides of lengths
(a) 7, 8, 12 (b) 6, 9, 14
(c) 3, 4, 8 (d) 2, 5, 6
units units units units
18. Ram's father is 36 years older than him. Three years ago he was nine times as old as Ram. The sum of their ages is
(a) 32 years (b) 36 years
(c) 40 years (d) 45 years
19. In the annual exam, 45% of the students fail in English and 35% fail in Maths. If 15% of the students fail in both Maths and English, the percentage of students who pass in both the subjects is
(a) 5% (b) 15%
(c) 25% (d) 35%
20. In a locality 40% of the house owners subscribe to English magazines, while 30% subscribe to Hindi magazines. If 12% subscribe to both Hindi and English magazines, what percentage does not subscribe to any magazine?
(a) 38% (b) 50%
(c) 42% (d) 18%
21. A swimmer can swim 8 km/hr in a stationary river. If the river is flowing at the rate of 4 km/hr, the time taken by him to travel 12 km from one place to another along the river and come back is
(a) 2 hours (b) 3 hours
(c) 3.4 hours (d) 4 hours
22. The H.C.F. of $3/5$, $6/25$ and $9/45$ is
(a) $3/45$ (b) $9/5$
(c) $3/225$ (d) $1/25$
23. The numbers between 201 and 300 which begin or end in 2 are—in number.
(a) 99 (b) 108
(c) 109 (d) 119
24. The number of times 7 will occur when you write numbers from 701 to 800 is
(a) 99 (b) 104
(c) 109 (d) 119
25. The cost of 5 pens and 10 pencils is Rs 35.50, while the cost of 3 pens and 20 pencils is Rs 33.50. The cost of 6 pens and 12 pencils would be
(a) Rs 42.60 (b) Rs 37.80
(c) Rs 44.40 (d) Rs 46.20
26. A shopkeeper buys 12 pencils for Rs 10 and sells 10 pencils for Rs 12. He earns a profit of
(a) 12½% (b) 22%
(c) 24.8% (d) 44%
27. The value of $(5838)^a - (5835)^a$ is equal to
(a) 33229 (b) 34269
(c) 35019 (d) 36249
28. The value of the expression $\sqrt{125} \times 17\sqrt{5}$ is equal to
(a) 425 (b) $425\sqrt{5}$

29. If 10% of a number is 100, its 20% should be

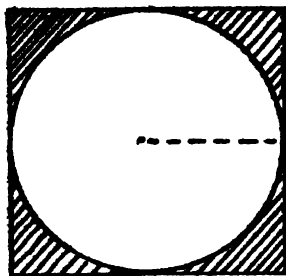
- (a) 267 (b) 272
(c) 282 (d) 287

30. A sum of money would become four times at simple interest in 10 years at the rate of

- (a) 25% (b) 30%
(c) 32.75% (d) 40%

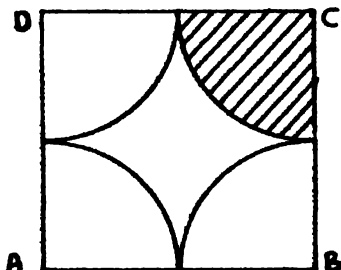
31. A circle is inscribed in a square. If the area between the square and the circle is A, the area of the circle will be

- (a) $A/(4-\pi)$
(b) $\pi A/(4-\pi)$
(c) $4A/(4-\pi)$
(d) $4A$



32. ABCD is a square. If the shaded area in the figure is equal to π , the area of the square is equal to

- (a) 4 (b) 16
(c) 4π (d) 8π

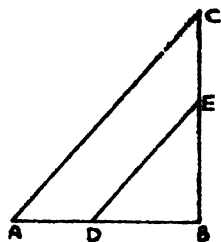


33. The diagonals of a quadrilateral are equal in length and are perpendicular to each other, when the quadrilateral is a
(a) Rectangle (b) Rhombus
(c) Parallelogram (d) Square

34. Two parallel sides of a trapezium are 12 cm and 8 cm and the distance between them is 7.5 cm. The area of the trapezium is
(a) 150 cm^2 (b) 45 cm^2
(c) 75 cm^2 (d) 90 cm^2

35. ABC is a right angle triangle of area A. If D, E are the mid points of AE and BC respectively, the area ADEC is equal to
(a) $A/2$
(b) $A/4$

(d) None of the above



36. If the perimeter of a rectangle is 32 cm and its area is 60 cm^2 , its breadth will be

- (a) 4 cm (b) 5 cm
(c) 6 cm (d) 7 cm

Directions: In questions 37-40, select the alternative which will come in place of ? out of the given choices:

37. 57, 51, 39, 21, ?, 3

- (a) 9 (b) 12
(c) 15 (d) 17

38. 3, 10, 101, ?

- (a) 1002 (b) 10202
(c) 10002 (d) 100001

39. 1, 3, 3, 7, 9, 13, ?, 21

- (a) 17 (b) 19
(c) 23 (d) 27

40. 1, 4, 4, 16, 64, ?

- (a) 256 (b) 512
(c) 1024 (d) 1280

Directions: The growth in operation of the Industrial Development Bank of India from 1980-81 to 1983-84 is given below. Answer questions 41-43 on the basis of this data:

GROWTH IN OPERATIONS:	(Rs crores)			
	1980-81	1981-82	1982-83	1983-84
Capital	145	200	255	385
Reserves	128	178	224	271
Profit	40	53	61	69
Annual Sanctions	1561	1742	2149	2625
Annual Disbursements	1066	1340	1577	1948
Outstanding Assistance	3063	4019	5092	6363
Assistance sanctioned to				
—Small sector	498	588	866	704
—Backward areas	711	645	841	1086

41. The percentage profit on the capital was highest during the year

- (a) 1980-81 (b) 1981-82
(c) 1982-83 (d) 1983-84

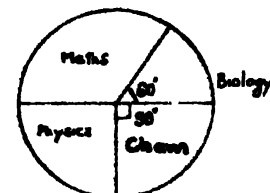
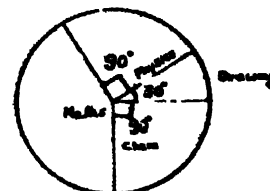
42. During this period the combined assistance to small sectors and backward areas increased by nearly

- (a) 36% (b) 43%
(c) 48% (d) 51%

43. The difference between outstanding assistance and the

annual disbursements was maximum during the year

- (a) 1980-81 (b) 1981-82
(c) 1982-83 (d) 1983-84



Directions: The diagrams shown above indicate the time-distribution of students A and B to various subjects they study. Answer questions 44-46 on basis of this data.

44. If A studies for 6 hours per day and B for 9 hours per day, how many hours per day (more or less) does A devote to Maths than B?

- (a) Half hour less
(b) One hour less
(c) Half hour more
(d) One hour more

45. The time devoted by B to Biology is—percentage of the time denoted by A to

Drawing.
(a) 100% (b) 150%
(c) 200% (d) 300%

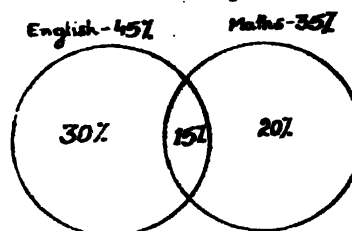
46. A third student C divides his time in the same proportion for Physics and Maths as B, but gives equal time to Chemistry and Biology. If he devotes one hour daily to Biology, he must be devoting—hours to Physics.

- (a) 1.12 (b) 1.2
(c) 1.33 (d) 1.4

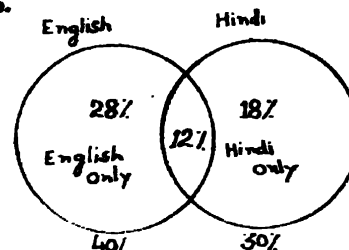
ANSWERS

1. (b) Since $a=3/4$ b, $12a=12 \times 3/4 b=9b$.
2. (a) $1/\sqrt{2}=1/1.414=0.707$ All other numbers are larger than this.
3. (d) Finding the square root as shown here, we note that addition of none of the numbers 5, 6, 7 will make it a perfect square.
4. (a) The square of an odd number divided by 4 can be written as $(2n+1)^2/4 = (4n^2+4n+1)/4 = 4n(n+1)/4 + 1/4$. The remainder will thus always be 1.
5. (c) $62\frac{1}{2}\% = 62.5/100 = 12.5/20 = 5/8$.
6. (b) $\sqrt{176} = \sqrt{16 \times 11} = 4\sqrt{11} = 4 \times 3.316 = 13.264$
7. (c) Let $x=7$. Squaring both sides, we get $x=.0016$
8. (d) If L is the length of the pole, then the portion of the pole above water is $L - (L/3 + L/2) = 2m$. Thus $L/6 = 2m$ or $L=12m$. Length of the pole in water $= L/2 = 6m$.
9. (d) Suppose she types x pages/hour. Then number of pages to be typed is $2.5x$. Pages typed at the new speed $= 3 \times (0.75x) = 2.25x$. Percentage of job unfinished $= 0.25x/2.5x \times 100 = 10\%$.
10. (b) Let their ages be $3x, 4x, 5x$ and $7x$. Then $3x+4x+5x+7x=76$ or $x=4$. The age of the eldest brother is thus $7x=28$ years.
11. (b) Let the temperatures of the five days be v, w, x, y & z .
Then $v+w+x+y+z = 32 \times 5 = 160$ (1)
 $v+w+x = 29 \times 3 = 87$ (2)
 $x+y+z = 34 \times 3 = 102$ (3)
Adding (2) and (3), we get $(v+w+x+y+z) + x = 189$. Comparison with (1) gives $x=29$.
12. (d) Let their ages be x, y, z and w , then $x+y+z = 24 \times 3 = 72$
 $y+z+w = 27 \times 3 = 81$
Since $w=31$ (given), $y+z=50$ and hence $x=22$ years.
13. (b) Since product of H.C.F. and L.C.M. is equal to the product of numbers, $L.C.M. = 9576/21 = 456$
14. (d) L.C.M. of a given set of fractions is equal to the ratio of L.C.M. of numerator to the H.C.F. of denominator; thus $L.C.M. = 40/7$.
15. (a) Let his list price be Rs 100.
Then $S.P. = Rs (112-28) = Rs 84$
 $C.P. = Rs 100/125 \times 100 = Rs 80$
 $Profit = Rs 4 = 4/80 \times 100\% = 5\%$.
16. (b) If C is the cost price and S the selling price of one pen, then $15C = 12S$, $S = 15/12C$
 $Profit = S - C = 15/12C - C = 3/12C = C/4$
 $Profit\% = C/4C \times 100 = 25\%$
17. (c) Sum of any two sides of a triangle must always be greater than the third side.
18. (b) If Ram's age is R and his father's age is F , $F=5R$, $F-3=9(R-3)$. Solving these we get $R=6$. Thus $F+R=6R=36$
19. (d) Let the students who fail in English and Maths be represented by the Venn diagram shown in the figure. Since 15% fail in both, it is clear that 30% fail in English only and 20% fail in Maths only. The total percentage of students who fail

$(30+20+15)=65$. Thus 35% students pass in both the subjects.



20. (c) As is evident from the Venn diagram, the percentage of people who subscribe to English or Hindi magazines is $(28+12+18)\% = 58\%$. Thus, the percentage of those who do not subscribe to any magazine is 42%.



21. (d) Total time taken $= (12/(8+4) + 12/(8-4))$ hours $= 4$ hours.
22. (c) The H.C.F. of a set of fractions is equal to H.C.F. of numerators over the L.C.M. of denominators. Thus, in the present case $H.C.F. = 3/225$.
23. (a) There are 99 numbers which begin with 2 (202 to 299). Some of these also end in 2.
24. (d) Seven occurs 99 times in the first place (in numbers 701—799), 10 times in the third place (707, 717, ... 797) and ten times in the second place (770—779).
25. (a) Let x and y denote the cost of a pen and a pencil respectively; then $5x+10y=35.50$, $3x+20y=33.50$.
Simplifying we get $x=5.50$ and $y=0.80$.
Then $6x+12y=42.60$
26. (d) Cost Price for one pencil = Rs 10/12
Selling Price = Rs 12/10
 $Profit = 12/10 - 10/12 = 22/60$
 $\% Profit = 22/60 \times 12/10 \times 100 = 44\%$
27. (c) The expression is equal to $(5838+5835) \times (5838-5835) = 11673 \times 3 = 35019$
28. (a) The given expression is equal to $5\sqrt{5} \times 17\sqrt{5} = 5 \times 17 \times 5 = 425$
29. (d) If the number is x , then $5/7x = 1025$ or $x = 1025 \times 7/5 = 1435$. 20% of 1435 $= 1435/5 = 287$
30. (b) If A is the sum, then interest $= 3A$
Thus, $3A = A.R.t/100 = A.R.10/100$ or $R=30$
31. (b) If L is the side of the square, the radius of the inscribed circle is $L/2$. The area between the square and the circle is $A = L^2 - \pi L^2/4 = L^2(1 - \pi/4) = L^2(4 - \pi)/4$
Area of the circle $= \pi L^2/4 = \pi A/(4 - \pi)$
32. (b) If L is the side of the square, the shaded area $= 1/4 (\pi L^2/4) = \pi L^2/16$.
Since $\pi L^2/16 = \pi$, $L^2 = 16$.

35. (c) Area of a trapezium = $\frac{1}{2}$ (sum of parallel sides) \times height = $\frac{1}{2} (12+8) \times 7.5$
= 75 cm²
36. (b) Since D, E are midpoints of AB and BC, DE \parallel AC. Area of DBE = $\frac{1}{2}$ DB \times BE
= $\frac{1}{2} (\frac{1}{2} AB \times \frac{1}{2} BC)$ = $\frac{1}{4}$ Area of ABC
= $\frac{1}{4} A$
Thus area ADEC = $A - \frac{1}{4} A = \frac{3}{4} A$.
38. (c) If l and b are the length and breadth of the rectangle, $2(l+b) = 32$, $lb = 60$,
Therefore $(l-b)^2 = (l+b)^2 - 4lb$
= $256 - 240 = 16$
Therefore $l-b = 4$; Also $l+b = 16$ which means $b = 6$ cm.
37. (c) The terms are obtained by successively subtracting 6, 12, 6, 12 ... from the previous term.
38. (b) Succeeding term = (Previous term² + 1)
39. (d) The given series is a composite series—the odd terms form the series 1, 3, 9, ... while the even terms form the series 3, 7, 13, 21, ...
40. (c) Each term, from third onwards, is the product of the two previous terms.

ANSWERS TO QUANTITATIVE ABILITY

(Continued from page 43)

- series.
14. (d) $\frac{n}{6} + \frac{2n}{5} = \frac{5n+12n}{30} = \frac{17n}{30}$
15. (a) Multiply $(x-y)^2$ and then substitute the value 3 for x . $(x-y)^2 = 4$, so $x^2 - 2xy + y^2 = 4$. Then if $x=3$, we have $(3)^2 - 2(3)y + y^2 = 4$ or $9 - 6y + y^2 = 4$. Now rewrite: $y^2 - 6y + 5 = 0$. By factor the expression $(y-5)(y-1) = 0$
16. (a)
17. (b)
18. (d) b = Lata's age now.
 $b+20$ = Sohan's age now
 $b-y$ = Lata's age y years back
 $b+20-y$ = Sohan's age y years back
 $b+20-y=2(b-y)$
 $b+20-y=2b-2y$
 $20=b-y$
19. (e) Let x be number of total students in the class. Then $\frac{1}{6}x$ = Students who opted for Economics
and $\frac{1}{3}x$ = Students who opted for Sociology
 $\frac{1}{6}x + \frac{1}{3}x = \frac{1}{6}x + \frac{2}{6}x = \frac{3}{6}x = \frac{1}{2}x$
number of students.
 $\frac{1}{2} = 50\%$ who offered Public Administration.
20. (d) Convert 4.5 seconds into double for convenience = 9 and double the distance 66 = 132 ft. Hence 132 ft covered in 9 seconds.
 132×400 ft in $9 \times 400 = 3,600$ seconds
 $3,600$ seconds = 1 hour
 $\frac{132 \times 10}{132}$ miles per hour
= 10 miles/hour
21. (a) $25 \times 3 = (25 \times 3) + (25 \times 3)$ by distributive law.
 $25 \times 3 = (20 \times 3) + (5 \times 3)$ by the same

- law. Hence
 $26 \times 3 = (26 \times \frac{1}{2}) + (20 \times 3) + (6 \times 3)$
22. (b) $10^5 = 10 \times 10 \times 10 \times 10 \times 10 = 1,00,000$
23. (c)
24. (e) Rate of speed = $\frac{\text{Distance}}{\text{Time}} = \frac{522}{9}$
= 58 km/hr
25. (b) $5y = 45/y$ multiply both sides by y
 $5y^2 = 45$ divide both sides by 5
 $y^2 = 9$. Take square root of both sides =
 $y = +$ or -3 .
26. (e) Strength one year back was $\frac{11}{10} \times 73,960$.
The strength two years ago was:
 $\frac{11}{10} \times \frac{11}{10} \times 73,960 = 64,000$
27. (b) The four three-digit numbers are 305, 350, 503, 530.
28. (a) The ratio of investment is 9,000:7,000:6,000 or 9:7:6. $9+7+6 = 22$. Rs 825 divided by 22 = Rs 37.50. each share of profit.
 $7 \times \text{Rs } 37.50 = \text{Rs } 262.50$ Radha's share.
 $262.50 - 230 = \text{Rs } 32.50$ left to be paid.
29. (a) $4 \times 3 = 12$
 $12 + 2 = 14$
 $4\frac{1}{2} = \frac{9}{2}$
30. (c) $16\frac{1}{2} = 16\frac{1}{2}$
 $4\frac{1}{2} = 4\frac{1}{2}$
 $12\frac{1}{2} = 12\frac{1}{2}$
 $23\frac{1}{2} = \frac{23\frac{1}{2}}{55\frac{1}{2}} = 57\frac{1}{2}$
31. (e)
32. (b) Take a decade as a unit (10 years)
= $48,400 (-\frac{11}{10})^2$
= $48,400 \times \frac{121}{100} = 40,000$
33. (a)
34. (a)
35. (b) Since Puran has more money than Sushma, x is greater than y . Then Puran has less money than Beant Singh, so x = less than z . This gives us $x > y$ or $y < x$ and $x < z$. Hence (b) is the correct expression.

ECONOMY

ECONOMICS OF FISCAL POLICY

By R. K. GUPTA

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India's fiscal policy is undergoing a marked change. Incorporating the much-needed aims and objectives which had been neglected for so long. Analysing the reasons for this shift in fiscal strategy. And its possible outcomes.

Fiscal policy, broadly speaking, deals with the deliberate use of taxes, government spending and public debt operations to influence economic activities in desired ways. In fact, it is that part of the national economic policy which is concerned with the receipts and expenditures of the government. These expenditures affect savings and investment, employment, national income, price level and the balance of payments. The paramount objective of the fiscal policy is to achieve economic stability and growth.

The fiscal policy has become increasingly subtle because the size of the budgetary surplus or deficit is deceptive in its effects on the economy. Various fiscal actions may generate the same surplus or deficit but with dissimilar effects on the economy. This is one reason why some doubt the competence of the government in handling the fiscal policy. They often feel that the political leadership lacks economic information and understanding and their economic advisers are unable to explain the economic situation to them. Political inhibitions also prohibit correct implementation. Consequently, the fiscal policy instead of stabilising the economy destabilises it. The post war experience in Britain is quoted as showing the ineptitude of the government in handling the fiscal policy. The government often followed an expansionary course when the economy was booming and took restrictive action when there was balance-of-payment crises, thus pushing the economy into deeper recession. The British experience motivated many economists to argue that the authorities should let the volume of money and credit increase steadily at a rate determined by the long-term growth trend of the economy.

Aims And Objectives

The fiscal policy in India has the twin objectives of supporting the development

strategy of our Five Year Plans and managing the economy in the short period. The fiscal tools have been used extensively to mobilise resources, raise the level of saving and investment and channel the flow of resources according to the plan priorities. Fiscal policy has also been used to facilitate modernisation and diversification of industries, protect the small scale sector, help export, promote employment and achieve other objectives of social and economic policies. In fact, the fiscal policy is aimed at stabilisation through appropriate demand management of the economy. An analysis of the budgetary policy presented till 1984-85 contained, more or less, the following features (i) to reduce disparities in income distribution (ii) to achieve economic stability (iii) to raise the taxation rates to minimise deficit financing (iv) to rationalise and simplify the tax structure to encourage savings and investments (v) to make tax policy an instrument of capital formation for economic development and growth and (vi) to develop an efficient system of production and equitable pattern of distribution of income and wealth to insure well-balanced progress.

Problems

In spite of such laudable features of the Indian fiscal policy, we are confronted with the problems of low growth rates and sectoral imbalances in the economy. These maladies in the economic system resulted in the shortage of investable capital, lower production, mounting unemployment and under employment, low per capita income and growing poverty. To add to all these, the continuous inflationary trend has aggravated the economic problems further. These maladies are due to improper use of scarce financial resources obtained through fiscal measures. A fiscal policy having a long term view would have avoided all this.

As far as the expenditure aspect of the fiscal policy is concerned, the Economic Survey 1984-85 has emphatically asserted that the government has been living beyond its means; since 1977-78, the government has been having deficits. Consequently, it has to resort to borrowing not to finance capital formation but to meet its day-to-day expenses. The amount of such borrowing has increased from Rs 128 crores in 1978-79 to Rs 2,325 crores in 1984-85. Such borrowing accounted for

expenditure in 1974-75; in 1984-85 it constituted 16.2%. Interest payment in 1984-85 accounted for Rs 5,990 crores as against Rs 1,228 crores in 1975-76. All along these years non-Plan expenditure has been rising at a rate substantially faster than the growth of current revenue. Consequently, budgetary resources for the Plan have been seriously eroded. Also, the increase in non-Plan expenditures of the states often results in larger transfers to states.

A Shift In Fiscal Strategy

The Union Budget 1985-86 takes a leap into the 21st century. The budget ushers in a new philosophy in the management of economic affairs. Throughout post independent India, the main thrust of fiscal strategy has been demand management. However, the budget for 1985-86 has put emphasis on an imaginative supply management. To make the structural changes effective from demand management to supply management, the budget has outlined the following priorities: (i) the process of pruning budgetary expenditure at the Centre and states must begin so that the necessary adjustment can take place over a period of time (ii) the public sector must have sufficient internal resources for its future growth (iii) deficits in balance of payment must be reduced to reconcile a manageable balance of payments with a tolerable debt profile (iv) export earnings would have to finance a larger proportion of imports to help reduce the deficit in the balance of payment (v) to increase the domestic production of importables wherever underutilised capacities exist (vi) aim at reducing costs and prices and improving competitiveness of industry (vii) regulations must facilitate growth and respond to the changing external and technological environment and (viii) there is an imperative need for closer coordination in fiscal, industrial and trade policies.

Likewise, the budget has also listed the priorities in the area of taxation. In the area of direct taxation, an important priority is to create an environment of growth, productivity and savings. In respect of indirect taxes the task is to bring about changes which would help in reducing costs of investment in priority sectors, encourage the growth of the small-scale sector and remove certain other distortions.

There is no denying the fact that fiscal strategies built up in the past have proved to be unproductive. All along these years the budgets have been used as an accounting exercise rather than an instrument for promoting production and development. Therefore in order to tackle the basic problem of poverty and unemployment the instruments of fiscal policy need to be rationalised and made growth-oriented. ■

REAGANATOMY OF CANCER

The discovery of a cancerous polyp in the US President Ronald Reagan's colon has made colon cancer the talk of the world. Some scientific facts about this affliction to which the 'low-fibre food' eating West is particularly susceptible.

What started as a routine removal of a non-cancerous polyp led to a finding that stunned millions the world over. Always a picture of health, the robust and vibrant President of the US Ronald Reagan, suffers from what is perhaps still the most dreaded disease—the cancer of colon. But unlike many of his predecessors who thought it best to hide their ailments from the public, the 74-year-old President "had courage enough to acknowledge that he is not Sir Galahad".

However, what gave the ailing President's image a boost was the bold historic decision he took before undergoing surgery. In an unprecedented move, he voluntarily yielded the powers of his office, albeit briefly, to Vice President George Bush. He, however, reclaimed his duties and powers following the surgery.

President Reagan's precaution was a wise one in the light of his ailment. A polyp—a small growth that generally appears on the epithelial tissues, like those that line the intestines. Intestinal polyps are common in people over 50 and can be treated with minor surgery involving cauterisation or snipping off, if detected early. If, however, they remain undetected and are allowed to grow they not only start interfering with the body's functions but may even become cancerous.

The prognosis of colon cancer is based

on a staging system devised by a London pathologist Cuthbert Dukes in the 1930s. The Dukes rating measures the extent of invasion by a cancer in the colon or rectum. According to this rating, Stage A refers to a cancer in the colon's innermost layers only. In this stage chances of the patient's being healthy five years after undergoing surgery are as high as 95-99%. In Stage B the cancer has progressed into the deeper layer of muscles across and along the colon which reduces the five-year survival rate to 75-85%. Stage C refers to cancer which has spread to lymph nodes. The survival rate, where less than three lymph nodes are involved, is 60-70% but is only 15-20% where 10

curable if detected in time.

of this cancer peaks at 75 years of age. Also, statistics reveal that a family history of bowel cancer or polyps increases a person's risk two or three times. President Reagan's elder brother Neil Reagan is also a victim of colon cancer.

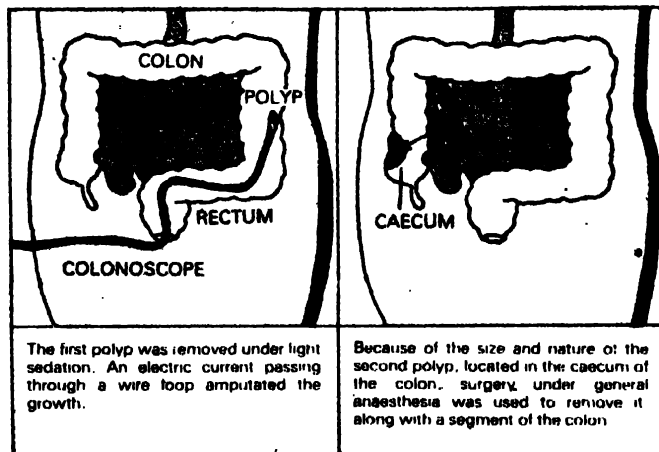
Drugs have proved largely ineffective in the treatment of bowel cancer. And, therefore, surgical removal still remains a fundamental treatment for colon cancer. In President Reagan's case, the doctors performed a right hemi-colectomy. Adopting a 'no touch' procedure, they excised a two foot section of the colon including the caecum, a portion of the small intestine and some lymph nodes, taking care not to open the section as they removed it in order to minimise the risk of infection and keep the polyp intact so that its cancerous cells would not spill into the body again where they could take root and multiply. A careful visual inspection of the liver and the rest of the abdominal cavity was made for

signs of malignancy. None were evident.

In fact, the doctors later remarked: "He has the insides of a 40-year-old." The entire operation took two hours 53 minutes. And even though analysis of the polyp has revealed its cancerous nature, the doctors are optimistic that there is a 95% chance that five years hence Reagan will be free from any signs of the illness.

However, Reagan's health will need close monitoring henceforth, for polyps have a tendency to recur. And the kind of intestine that repeatedly grows polyps is the kind that has to be watched for signs of cancer. Doctors have, in fact, recommended careful follow-up examinations at regular intervals.

J.S.

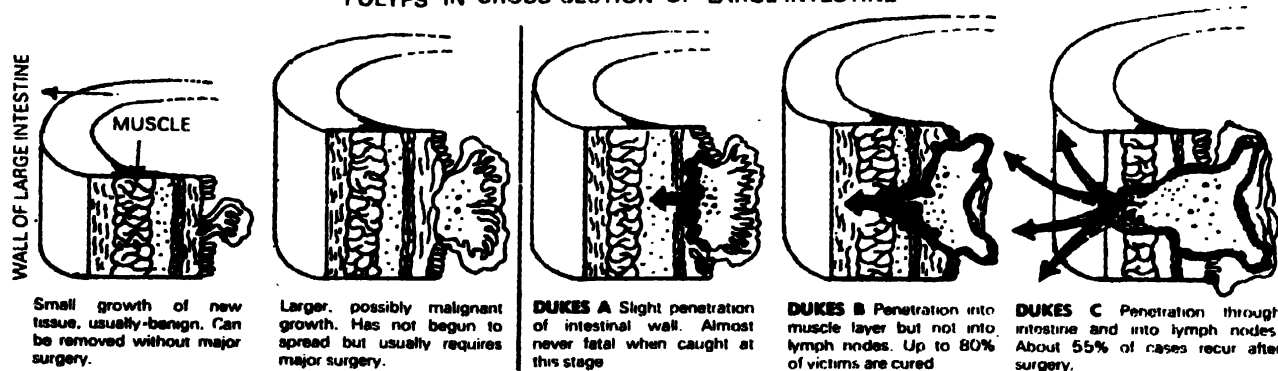


or more nodes are involved. And in Stage D where the cancer has metastasized to the liver or other organs, the mortality rate is as high as 95% and above. According to the Dukes rating, the polyp in President Reagan's caecum is classified as Stage B.

Research has revealed that unlike other major malignancies, colon cancer is 95%

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POLYPS IN CROSS-SECTION OF LARGE INTESTINE



CAT: REVOLUTIONISING SCANNING

BY URBAN KANT

What does the abbreviation CAT stand for? One CAT assesses a person's aptitude for sound evaluation, analysis and interpretation of data before letting him into the managerial fold. But there is also another CAT which stands for Computerised Axial Tomography introduced to the world 14 years ago.

From 1896 onwards X-ray reigned supreme as a diagnostic aid. The X-ray picture or the radiograph, as it is called, is a two-dimensional image of a three-dimensional body organ. Several planes are collapsed into one and no information about the shape, depth and relative position of various structures is obtained. The world was so blinded by the medical application of X-rays that these shortcomings of radiographs were never felt. Attempts to overcome these limitations of simple X-ray pictures have resulted in the development of CAT. In 1971, Atkinson Morley's Hospital, London, received the world's first CAT system. It took four years for a research team in E.M.I. Medical Ltd, under the direction of Godfrey Hounsfield to produce the first commercially viable machine.

Normally, to visualise the soft tissue of the brain in X-ray picture a contrast medium (either a dye in the blood or air through the backbone) has to be injected. These are painful and potentially hazar-

dous procedures. Hounsfield introduced the computerised X-ray scanning of the head and the soft tissues within the skull became visible without recourse to contrast media. CAT scanning involves no hazard or discomfort for the patient. Neuroradiological practice was transformed overnight and Hounsfield was subsequently awarded the Nobel Prize for Medicine in recognition of his magnificent contribution to the investigation and management of patients with cerebral disease. Though head scan was started in 1971, total body scanning was introduced three years later.

How does it work?

CAT is an X-ray technique which uses a computer to reconstruct an image of a thin slice of the body. The images are normally obtained in a cross-sectional axial plane. This avoids the overlapping of superimposed structures involved in most of the conventional radiography. The greatest advantage of CAT over usual X-ray pictures is its ability to detect even small variations in tissue density. A CAT examination consists of a series of cross-sectional scans 1 cm apart through the part of the body to be examined.

A source of the X-ray (tube) is mounted on a gantry opposite to a number of detectors. The gantry moves or rotates round a central tunnel in which the patient lies. As the X-ray tube rotates round the

variation in the amount of X-rays arise from the patient. Data from the detectors in all directions about the linear X-ray absorption of X-rays in different tissues is fed continuously into a computer. The computer calculates an X-ray attenuation value for each point on a cross-section of the body and reconstructs an image. Essentially the CAT scan represents a mathematical reconstruction of anatomy in terms of X-ray absorption. The data is stored on tape or a floppy disc and displayed on a TV screen.

The delineation of the soft tissues by CAT depends on the contrast created because of the difference in the X-ray absorption between the soft tissue and the surrounding fat. In general, the fatter the patient, the better the scan. In very thin individuals and in children the absence of fat may produce a scan which is difficult to interpret. Because of the ability to detect and define the shape, size and extent of a mass, CAT is very helpful in determining the stage and extent of cancer and for monitoring the response to treatment.

With the introduction of CAT scan, a wide spectrum of diseases involving the brain, lungs, liver, pancreas, spleen, kidneys, intestines and vertebral column can be detected easily and rapidly. It has, in fact, revolutionised the diagnosis of diseases. At present, in India, CAT scanning facility is available only at few selected hospitals in the metropolitan cities and is expensive too. It will be some time before it comes within the reach of the common man.

LATEST IN SCIENCE

Hearing Eyes

MEDICAL RESEARCHERS have already found a way of implanting a wholly artificial ear to enable the deaf to hear. But this magic ear cannot help those who have suffered extensive damage to auditory nerves. However, there's hope for even such people today. Devices have been developed which enable the deaf to hear indirectly through sensory cues provided by sight and touch.

The Autocue is one such device which aids a deaf person in lip-reading. The microphone and micro computer that are worn on the belt help the deaf 'read' differences between hard-to-distinguish lip movements by projecting digital symbols onto the lens of special eyeglasses. These digits appear next to the speaker's mouth and hence enable the deaf person to lip-read more easily and accurately.

Researchers are now trying to develop portable vibration devices to help the deaf comprehend the range and resonance of spoken language. Like braille, these

devices make use of the sense of touch. This device again complements lip-reading.

Impostor Foods

SCIENTISTS HAVE developed artificial or engineered foods which are just like the natural foods but have many advantages. They are not only cheaper but also provide proteins, vitamins and nutrients that match and sometimes exceed nature's own. In the recent past, research in food engineering, carried out by food specialists and university scientists has concentrated on concocting meat substitutes.

Surimi is one such concoction that has really caught on in the US. The manufacturing process involves mechanical deboning of ocean fish which is then minced and washed repeatedly until it has been stripped of taste, colour and smell. The meat is blended into a whitish viscous paste to which the required natural flavourings are added. It can then be force-pressed through dies and moulds into

all manner of shapes and textures. An example of Surimi is pseudo crab which sells at one-fifth the price of crab meat.

So, what you are eating may not be what you think it is! But does it matter? As long as it is healthier and tastier?

Clickvenience

THE LATEST in Japanese technology is the electronic camera. It does not require any film. For, films are compatible with neither computers nor digital televisions.

Light entering through the lens gets focussed on a small integrated circuit, which responds by generating a pattern of electrical charges that mirrors the incident light and stores it on a miniature floppy disc. To view the pictures one simply has to insert the disc into a shoe-box size converter that is connected to a conventional television set and switch it on. The screen becomes the darkroom when the disc is connected to a digital television. Any adjustments in focus, exposure and framing miscalculations can be corrected to get perfect pictures.

ARJUN SRIVASTAVA

NEWS CAPSULE

AWARDED

The Special Jury Award at the 14th International Film Festival at Moscow to India's official entry *Saarensah*, directed by Mahesh Bhatt. The Golden Award for best feature film was shared by *Come And See* (USSR), *Soldier's Story* (USA) and *End Of The Nine* (Greece).

The Jnanpith Award for 1984, carrying a cash prize of Rs 1.5 lakhs, to Malayalam writer Thakazhi Shiv Shankara Pillai. The 71-year-old Pillai, known better by the name of his village Thakazhi in Kerala, is the author of more than 45 novels and 800 short stories. Among his works are *Puthumalar* (New Blossom), *Thattiyude Mekan* (Scavenger's Son) and *Chemmen* (Prawns). The last novel won him the Sahitya Akademi Award and Ramu Kariat's film based on it won the President's Award for best feature film.

APPOINTED

L.K. Jha, former Chairman of the Economic Administrative Reforms Commission, as Adviser to the Prime Minister on administrative reforms, with effect from Jul 1. The assignment will be for a period of two years.

I.S. Chaudha, Additional Secretary in the Ministry of External Affairs, as the High Commissioner to Bangladesh, succeeding I.P. Khosla.

D.A. La Fontaine, Air Marshal as new Chief of Air Staff with the rank of Air Chief Marshal, succeeding L.M. Katre, who died in office on Jul 1. La Fontaine, the Air Officer Commanding-in-Chief of Western Command, was commissioned in 1950. He was awarded the Param Vishisht Seva Medal in 1984 for rendering distinguished services of an exceptional order.

VISITED

Von Kyung-Lee, South Korean Foreign Minister, on Jul 18 as the head of a high-level delegation for talks with Indian officials and businessmen on economic cooperation.

Hans Dietrich Genscher, West German Vice-Chancellor and Foreign Minister on Jul 10-11, on a two-day official visit during which he had talks with senior Indian leaders on international and bilateral issues.

SCIENCE

Diplonychus Indicus: Scientists in Madras have found a cannibalistic water bug that gobbles up the larvae of malaria mosquitoes; the bug could be a potential agent for biological control of mosquitoes, say Dr P. Venkatesan, and Dr C.M. Jayachandran. The doctors found the bug to have a particular affinity for mosquito larvae. "Their appetite for mosquitoes increases in direct proportion to the density of mosquitoes." The bug has been named *Diplonychus indicus*.

Search for SETI: NASA has launched a monumental ten-year search for extra-terrestrial intelligence (SETI), in which computers and giant antennae will try to make sense of the earth's incoming radio signals. For the purpose, it will develop a highly sophisticated receiver-

analyser able to scrutinise millions of radio frequencies in the cosmic cacophony. SETI emerged from ideas at the University of Stanford. Listening to the stars is not new but this is the first time that it will have been so exhaustive, using several radiotelescopes around the world.

Longevity: A conference on "realistic expectations for a long life" has concluded that elimination of major causes of death like cancer and heart disease is not likely to extend the human life span for more than 12 years. The conference, held in Florida, USA, felt scientists have already done so well in extending the life span that few are still looking for ways to increase it further. Instead, scientists should find ways to keep the elderly active and under little stress for as long as possible. Researchers debunked myths like reports that villagers in Soviet Georgia live to 150 years. Longevity, they noted, depends on an active family life, outdoor living and little lifestyle changes.

NEIGHBOURS

Islamisation of Pakistan's banks: Pakistani banks stopped accepting interest-bearing deposits from Jul 1 in the latest phase of the country's plan to reorganise its banking system along Islamic lines. Existing accounts will be converted into so-called profit-and-loss sharing accounts. The change, which also applies to foreign banks, comes at the start of the new financial year.

Afghanistan has offered friendship to Iran, Pakistan and China but warned of unspecified consequences if they continued to help Afghan guerrillas. President Babrak Karmal told the ruling People's Democratic Party politburo that Pakistan had become a tool in the hands of America, that the Iranian regime was training, arming and sending rebels to Afghanistan and added that "the Chinese hegemonists also have a hand with them". Karmal ended by advising them to take "useful steps in accordance with the wishes of their people and principles of peace, coexistence and good neighbourliness."

EDUCATION

Pace-setting schools: The government proposes to set up model schools in every district in the country to act as pace-setting institutions, Union Education Minister K.C. Pant told an NCERT meeting in New Delhi on Jul 17. The schools will have a common medium of instruction and curriculum and students will be largely from the rural areas. The NCERT has already constituted various committees to develop testing and evaluation machinery, orientation of teachers, develop curriculum and instruction models and prepare guidelines for academic inputs. The model schools are expected to serve as a laboratory to try out experiments in regard to providing quality education to poor children.

Three-year B.A. compulsory for M.A.: The UGC has made it mandatory for candidates all over the country to first complete a three-year degree course in B.A. to be eligible for admission to M.A. The new provision is expected

to affect a large number of students as the duration of B.A. in several Indian universities is just two years. Where universities are unable to change over to a three-year course, they may award a B.A. degree after two years but no student of this stream will be eligible for admission to M.A. unless he/she has undergone a one-year bridge course. Other provisions: The number of actual teaching days should not be below 180 in an academic year, or 40 hours in a week; students should attend a minimum of 75% of all lectures for being eligible to take an exam; examination papers shall be framed so as to ensure that no part of the syllabus is left out of study by a student.

DEFENCE

IAF's new transport aircraft: India formally inducted into the air force the Soviet-made long range transport aircraft IL-76, rechristening it *Gajraj*, on Jul 16. The aircraft will provide the Indian Armed Forces the vital strategic mobility and add a new dimension to the country's air lift capacity, said Defence Minister P.V. Narasimha Rao at the formal induction ceremony in New Delhi. The Transport fleet had been allowed to run down because of the concentration of resources in purchasing fighter aircraft. *Gajraj* can carry 225 troops in the pressurised cargo compartment or can be used to transport 43 tonnes of equipment. It can also be used as an ambulance to carry 72 stretchers. It can airdrop 126 paratroopers in 25 seconds in an area of two km.

No Hawkeyes for Pakistan: The US has decided not to supply Hawkeye E-2C aircraft to Pakistan after a Pentagon study team determined that the aircraft would not be useful in the mountainous Pak-Afghan border area. The move is being seen by observers as a sign of the US intentions to improve relations with New Delhi. Islamabad had asked Washington for the Hawkeyes, used for early warning border surveillance, on the ground that they would help combat Afghan armed incursions along the border.

The elusive US-USSR balance: Despite spending more than one trillion dollars on defence during the first Reagan term, the US is no better off than the Soviet Union in a military matchup since 1980, according to a study by the US congressional research service. While the US raised defence spending by large amounts in the past five years, those increases have done little more than to offset Russian spending, says the study. The study says that the "peacetime balance is a whole lot better" than most of the official comparisons made by civilian and military leaders but in wartime, "the balance is pretty bad". That is because the Russians have far greater numbers of men and equipment to throw into a war. The Russian forces are heavily weighted towards land operations while the US forces are widely split among land, sea and air operations. But the Russians need balanced forces "a whole lot less than the US" because the overriding Soviet concern is protection of their homeland while the US has a series of worldwide military alliances.

PLACES

Thimpu: The capital of Bhutan staged talks between the Sri Lankan Government and six Tamil militant groups to thrash out a lasting solution to Sri Lanka's ethnic problems.

Kuala Lumpur: The Malaysian capital was the scene of the 18th annual meeting of foreign ministers of the six ASEAN countries.

Vienna: A three-day OPEC meeting was held in this Austrian capital, to check falling oil prices.

Nairobi: Was for one week (Jul 15-29) the centre of the largest ever gathering of women. The Kenyan capital was the venue of the 140-nation UN conference on the status of women.

Merapani: A town on Assam's border with Nagaland; thousands of people fled this town in the wake of clashes between the security forces of the two states.

Karnal: Will be the site of a six-million tonne oil refinery to be set up in the joint sector involving the Union Petroleum Ministry, the state government and private companies.

Kalpakkam: India's first 500Mw fast breeder reactor will come up in this town near Madras.

Leticia: The southern-most city of Colombia. A DC-6 Colombian Air Force plane carrying 81 people enroute to Bogota, the country's capital, crashed into a jungle 32km off this city killing all passengers.

Addis-Ababa: The capital of Ethiopia, hosted a conference of the member-states of the Organisation of African Unity (OAU). The communique released at the end of the conference called for a boycott of South African airports by all international airlines.

Alabama: The home of a school for mercenaries in the US. The infamous academy run by Frank Camper trained the Sikh extremists Lal Singh and Ammand Singh, who are suspected to be responsible for the recent Air India Jumbo air crash over the Atlantic.

Lima: The capital of Peru. An Indian team led by Mohsina Kidwai, Union Health Minister and Arun Singh, Parliamentary Secretary, visited Lima to participate in the inauguration of its new President, Alan Garcia.

Paris: A powerful explosion tore through a building on Jul 21 at the French capital's Le Bourget airport killing two people and injuring nine others.

Haifa: The Atlit military prison holding Lebanese Shias is located in this port city of Israel. It came into news when the Shi'ite Moslems, who hijacked a TWA plane, demanded the release of Lebanese prisoners in return for freedom to the hostages.

Milan: The Italian city hosted a two-day summit meeting of the European Community leaders. The summit was chaired by PM Bettino Craxi of Italy.

Weisbaden: The 39 American TWA hostages were taken to this West German town after they were freed by their Shi'ite captors. S.R.

ECONOMY—National

The Karnal refinery, initially proposed to be a Seventh Plan public sector project, will now be taken up in the joint sector, involving the Petroleum Ministry, state governments and some private companies. The Petroleum Ministry is in touch with the governments of Haryana and Rajasthan for their participation in the project, estimated to cost Rs 1,360 crores. The six-million tonne refinery is intended to meet the petroleum demands of the northern states from 1990.

NCAER reviews Indian economy: The National Council of Applied Economic Research (NCAER) says in its latest review of the Indian economy that the farm sector's contribution to the overall economic growth fluctuated widely during the Sixth Plan period while the industrial sector's contribution remained "notably below the target" in all five years. The economy was expected to have grown by about 4% in the last year of the Sixth Plan (1984-85) as compared to 7.4%, 1.7%, 4.6%, 7.7% growth recorded in the previous four years. It praised the Union Budget for the current fiscal year for the reforms it introduced even at the cost of revenue. But it disputed the contention that the Rs 3,349-crore deficit left uncovered in the Budget would not be inflationary. It pointed to the sharp rise in railway fares and freights, rise in prices of petroleum products and steel and rise in the overall purchasing power. It called for according priority to supply management of sensitive commodities like sugar, oil and pulses to combat rising prices.

Shares to workers: All public limited companies in the public sector will have to offer 5% of their new public issue of equity shares to their workers, according to a Union Government order. Public limited companies would also offer to their staff a 'special class' of debentures which could be converted into equity shares at the end of five years of their issue. The objective of the schemes is to involve the workers and employees in the well-being of the companies they are working for, according to Finance Minister V.P. Singh.

Apex investigating agency: The Union Government has decided to set up a Central Economic Intelligence Bureau as an apex investigating agency intended to curb tax evasion, black money and smuggling. The bureau, which will coordinate activities of the existing agencies such as the revenue intelligence, customs and excise intelligence, will be headed by a director-general with the rank of an additional secretary. The bureau will act against organised gangs of smugglers, black marketeers and other economic offenders, and investigate bank frauds and insurance frauds.

Bumper harvests lead to acute storage problems: The International Wheat Council (IWC), which monitors world cereal developments from London, says in a market review, that India, after two successive bumper harvests, is facing acute grain storage problems because of its success in agriculture. The last two harvests yielded over 150m tonnes each, making India more than self-sufficient in food, the IWC said. Grain stocks held by government agencies alone in June totalled 28m tonnes—10m tonnes more than India's grain storage capacity. Wheat is being stored mostly in the

open, with only temporary protection against rain and pests. The IWC said an extra 2m tonnes of Indian grain would probably be exported in the current crop year in addition to the sales of 7,00,000 already concluded.

ECONOMY—International

Consensus still eludes OPEC: A three-day meeting of the Organisation of Petroleum Exporting Countries (OPEC) ended in Vienna on Jul 7 after failing to find a new strategy for propping up oil prices. The meeting, however, reached a consensus to stop cheating on OPEC pricing rules but adopted no specific actions. Oil ministers of the 13 OPEC member-states also tentatively agreed on the need to adjust supply to seasonal market demand while maintaining their overall production ceiling.

World Bank warns industrialised countries: The World Bank has warned that industrial countries could trigger a world recession if they did not undertake structural changes in their economic policies. In its World Development Report 1985, the bank says that if they were to continue with their present policies, the industrialised countries would only aggravate the debt servicing difficulties of the developing world. For instance, the US budget deficit deteriorated by \$ 162b between 1979 and 1984 and the deficit is expected to remain high, thus increasing the interest rates on short-term loans. The high dollar rate has stimulated exports to the US and increased production in other countries. But to bring down the interest rates and at the same time avoid the recessionary impact of a policy change, the US would have to coordinate carefully with other industrialised countries. The report also criticises the increased protectionist measures adopted by industrial countries which reduced the export earnings of developing countries. Protectionism, the report says, is a reflection of the failure to take adequate measures to deal with structural problems. In this context, it points to the high unemployment level in industrial countries.

Sino-Soviet accords: China and the Soviet Union have signed an agreement to open up ports, transfer goods and introduce shipping between two border areas in northeast China. The agreement came at the end of week-long talks between the two countries in Beijing. The agreement is expected to boost trade by 43%. It is in addition to an accord signed between Moscow and Beijing to nearly double their barter trade in the next five years to \$ 3.5b dollars.

Developing countries' bid to improve trade: A two-day ministerial conference of the Global System of Trade Preferences (GSTP) concluded in New Delhi on Jul 26 after fixing a time schedule of two years for tariff and non-tariff concessions, including an across-the-board tariff cut of 10%. This is considered an important step taken by developing countries to increase trade among themselves. A negotiating committee was directed to adopt three approaches to increase trade volume—traditional product-by-product approach, an across-the-board reduction of 10% and specific sectors of particular socio-economic importance to developing countries like processed tropical products, non-textile handicrafts, textiles and agricultural products. The time-frame stipulates that the first round of negotiations by the committee, which will meet

soon in Germany. It should not start later than May 1, 1986 and should be completed by May 1 1987.

EVENTS—National

India's forest policy is being reoriented to ensure optimum utilisation of land, water, livestock and human resources and restore ecological balance, according to Union Environment Minister, Vir Sain. The country's forest strategy will evolve mainly around three priorities—social forestry for meeting domestic needs of rural and semi-urban communities, production forestry to cater to the needs of forest-based industries and environmental forestry to restore the ecological balance. The reoriented forest policy will also take into account augmenting fuelwood, fodder, small timber and minor forest produce to help fulfil the basic needs of the people.

A two-day conference of Governors concluded in New Delhi on Jul 6 after discussing several national and regional issues. Among other subjects, the conference stressed the need to review and redefine the role of Governors as university chancellors and keeping universities free from political interference. It underlined the need for maintaining the momentum gained in the implementation of various welfare schemes for scheduled castes and tribes and other weaker sections. Eighteen Governors and six Lt Governors took part in the closed-door meeting which was also attended by Vice-President P Venkataraman, PM Rajiv Gandhi and several Central ministers.

Rigorous imprisonment for mutineers: Eleven men of the Punjab battalion were on Jul 12 sentenced to rigorous imprisonment ranging from four to 12 years after being found guilty by a court martial of joining a mutiny in the armed forces on Jun 10, 1984. The 7-member court martial also dismissed all the 11

from service and reduced the ranks of two havaldars and two naiks. The alleged mutiny took place after the army action in the Golden Temple in Amritsar.

Wage boards: The Union Government on Jul 17 announced the constitution of wage boards for sugar workers and newspaper and news agency employees. The sugar wage board will be headed by J. L. Tandon, a former judge of the Punjab and Haryana high court, and the wage board for newspaper and news agency staff by U. N. Bachawat, a retired judge of the Madhya Pradesh high court.

Commission to inquire into Assam-Nagaland clash: Union Home Minister S.B. Chavan on Jul 23 announced the appointment of a commission of inquiry into the armed clashes between Assam and Nagaland police in the Merapani area. Chavan told the Lok Sabha that the commission would inquire into the clashes, the conduct of officials and politicians and fix responsibility. The guilty, however high and mighty, will not be spared, he asserted.

Larkins case verdict: New Delhi's Additional Sessions Judge K.B. Andley on Jul 24 sentenced Maj Gen F.D. Larkins, his brother Air Vice-Marshal K.H. Larkins and Lt Col Jasbir Singh to ten years' rigorous imprisonment for espionage. A fourth accused, businessman Jaspal Singh Gill, was sentenced to two years rigorous imprisonment on two counts of conspiracy. The four were arrested in November 1983 for running an espionage network in collaboration with some US officials and supplying them sensitive and highly classified information on Soviet military equipment.

EVENTS—International

Israel's austerity plan: The nine-month-old Israeli Government on Jul 2 approved a wide-ranging emergency austerity plan including an 18.8% devaluation of the shekel against the dollar. The Shimon Peres Cabinet also decided to freeze wages and prices for three months, increase the prices of petrol and subsidised foods in a bid to improve the sagging economy of Israel.

Mugabe back in the saddle: Zimbabwe PM Robert Mugabe swept back to power on Jul 6 with an easy victory in the country's general election, his Zanu-PF party capturing 63 of 79 seats contested. Mugabe promised to create a one-party state in the next five years and threatened tough action against white minority and black opposition leaders who stood in his way. Mugabe called his party's victory a mandate to unite "our people under one political umbrella". The election was the first in Zimbabwe since independence five years ago and almost 100% of the 2.9m registered voters cast ballots. The main opposition party PF-Zapu of veteran nationalist Joshua Nkomo captured 14 seats in the National Assembly.

ASEAN call to Vietnam: Foreign ministers of ASEAN member-states on Jul 9 ended a two-day conference in Kuala Lumpur by calling upon Vietnam to open proximity talks with the coalition government of Kampuchea. A joint communique issued at the end of the meeting expressed ASEAN support for the coalition government of Kampuchea under the presidency of Prince Norodom Sihanouk. The communique deplored Vietnam's recent offensive along the Thai-Kampuchean border and reaffirmed its solidarity with the government

PERSONS

Andrei Gromyko: Elected President of the Soviet Union by a joint session of the two houses of the Russian Parliament.

Eduard Shevardnadze: Appointed Foreign Minister of the Soviet Union. He replaces Andrei Gromyko who was named President after serving as foreign minister for a record 28 years.

Justice D.N. Kripal: Judge in Delhi High Court, was appointed to head the commission of inquiry set up to probe the Air India plane crash that killed 329 people near Ireland on Jun 23.

Li Xianian: The Chinese President visited the US and Canada; this was the first ever visit to the two North American nations by a Chinese head of state.

Ranganath Mishra: Is heading the commission inquiring into the riots in Delhi, Bokaro and Kanpur that followed Mrs Gandhi's assassination.

O.E. Setubal: The Foreign Minister of Brazil visited India recently. He signed agreements on bilateral cooperation in science and technology and energy systems, following talks with top Indian leaders.

Won Kyung Hee: South Korea's Minister for External Affairs was on a four-day official visit to India (Jul 18-21). During official talks the two sides focussed on bilateral economic relations and the need to rectify trade balance between the two countries.

Hans Dietrich Genscher: The Vice-Chancellor and Foreign Minister of West Germany. A framework for a more active economic, cultural, technological and political cooperation between the two countries, was worked out during his talks with the Indian leadership.

Indu Prakash Singh: Took over as the new Indian Ambassador in Burma on Jul 8.

Chit Hlaing: The Burmese Foreign Minister. During his Rangoon visit the External Affairs Minister, Khurshid Alam Khan, discussed with him ways to strengthen and diversify economic and cultural relations between the two nations.

J.F. Riberio: Was appointed as the new director general of the Gujarat police.

Sharon Mecaulliffe: A 36-year-old social studies teacher from New Hampshire, US, will be the first ordinary citizen to go in space.

B.G. Deshmukh: Chief Secretary to the Maharashtra state government is inquiring into Bombay's 'Dharavi land scandal'.

Vijay K. Nambiar: Director in the Ministry of External Affairs has been appointed India's new Ambassador to Algeria.

Nikolai Ogarkov: Ousted 10 months ago as Soviet Chief of Staff, made a dramatic comeback with his appointment as the Commander-in-Chief of the Warsaw Pact Forces, one of the country's three top military positions.

Jaswant Singh: Retired Supreme Court judge has been appointed to go into charges of corruption, misuse of power and nepotism levelled against the Haryana Chief Minister, Bhajan Lal.

S. R.

YOUTH ENTERPRISE



In 1948, seven European countries got together and founded the International Association of Students in Economics and Management (AIESEC). At that time, the founders could hardly have visualised the kind of reputation that AIESEC would one day enjoy. The world's largest student-managed, non-profit and non-political organisation today, its purpose is to help students with interest in management and related fields to explore and develop their managerial skills through seminars and traineeship programmes hosted by companies the world over.

AIESEC IND, as the name suggests, is the Indian wing of the international organisation. Considering the fact that it is still an infant, having been established only in 1980, it has done very well for itself. AIESEC IND hosted the 2th Asia Pacific Congress in New Delhi from Aug 2 to 18, 1985. A big achievement that.

Students with enthusiasm, dedication and a fervent wish to move ahead are welcome to join its exclusive ranks.

and the people of Thailand in their actions to defend themselves.

Declaration for world unity and peace: An Indian-drafted declaration seeking to provide a basis for bringing together governments with diverse positions has been submitted to members of the United Nations. The seven-page draft deals with a wide range of major global issues such as the arms race and conflicts, apartheid, economic crisis and human rights. "The enormous wealth in human resources and scientific talents should be turned from destructive pursuits to constructive ends," the draft emphasises. The draft spells out four basic prerequisites of a stable world order; realisation of international peace and security, disarmament, especially nuclear disarmament, global economic and social development, independence of peoples under colonial and foreign domination.

Political fallout of soccer riot in Brussels: The coalition government of Belgian PM Wilfred

Martens resigned on Jul 16 after being splintered over the handling of a soccer riot in May. Martens took the decision to resign the government during an emergency cabinet meeting, a day after Deputy PM Jean Gol resigned in protest against the refusal of Interior Minister Charles Ferdinand-Nothomb to accept blame for the soccer riot in Brussels on May 29 in which 38 people were killed.

Tragedy in Italy: At least 200 people were killed when a dam burst in the north Italian region of Trient, sweeping away houses and three hotels. Numerous tourists, mainly Italians and Austrians, were thought to be among the victims.

Addis Declaration: The Organisation of African Unity (OAU) ended its 21st summit meeting in Addis Ababa on Jul 21 after resolving to take measures to bail out African states facing debt and hunger. The summit adopted a plan, described as the 'Addis Declaration', which envisages a multi-pronged approach to

improve the food situation, rehabilitate agricultural development and alleviate external debt. The three-day summit also adopted a priority programme for the next five years to pave the way for self-reliance and growth.

Dubious Sino-US accord: China and the United States on Jul 23 signed a nuclear cooperation agreement, after almost a year of debate. The agreement does not contain any assurance from China that it would not transfer the nuclear technology to countries like Pakistan to make a bomb. The US is believed to have accepted Chinese verbal assurances in this regard at their face value though the Pentagon remained unconvinced. Pentagon objections were understood to have been overruled by the higher authorities.

Iraq not to host non-aligned summit: Iraq announced on Jul 28 that it was bowing out from hosting this year's eight non-aligned summit. A foreign ministry statement said the decision had been prompted by "the huge responsibilities imposed on Iraq by the present circumstances in the region which make it unable to shoulder the burden of hosting the summit".

DID YOU KNOW THAT...

■ for 14b people affected by serious mental disorders, there are just over 21,000 beds in 46 mental hospitals in India? Another 2,000 or so beds can be provided in teaching hospitals

■ 'boycott', refusal of a group of persons to have dealings with another individual or group in order to reprimand the latter or exercise pressure, is named after Charles Cunningham Boycott, land agent in Mayo, Ireland? Boycott's merciless evictions led the Land League in 1880 to forbid any social or business interaction with him

■ Asha Purna Kachru, a mathematician and computer scientist who works at a research institute near Bonn, is the first Indian member in Bonn's City Council in West Germany (Federal Republic of Germany)?

■ 2,339 cases of fraud involving approximately Rs 40.25 crores were reported to the RBI by 28 public sector banks during the financial year 1984-85?

■ Giotto, an unmanned European spacecraft, which will come within 300 miles range of Halley's Comet on Mar 13, is named after Giotto di Bondone, the 14th century painter who saw the comet in 1301 and depicted it in his painting, *The Adoration of the Magi*, as the star of Bethlehem?

■ Japan has about 24m female workers, most of them employed as OL - office ladies? They have one of the jobs, either serving tea or running errands: much like our male peons. The average wage of a woman worker in Japan is less than half that earned by men. After years of discussion, this year, the Japanese Parliament finally passed a Bill ensuring equality at the workplace

■ the Nobel Prize money has been increased by 1,50,000 crowns (\$16,000) to compensate the decline in the value of crowns, the Swedish currency? In dollar terms, the value of the award remains the same, \$1,99,000.

■ an estimated 28m people live in urban slums, out of which 4.3m are in Madras?

■ the world's highest university, 3,666 m above the sea level, is in Lhasa, the capital of Tibet?

■ SCARAB, the system which picked up the

Kanishka's black box, is the abbreviation for Submersible Craft Assisting Repair and Burial? It is a robot built by an American company in 1976. A complete system with its own launching equipment, power generation, and the submersible vehicle, the system can be transported in the cargo-hold of a 707 type aircraft.

The black box was pinpointed by SCARAB with its 360 degrees search sonar and then photographed with its still and video cameras that can view objects 200 m in the darkness of the deep ocean with the help of searchlights.

■ INTELSAT, the world's first multinational communications satellite conglomerate, had launched its first satellite, Early Bird, on Jun 28, 1965? It is a non-profit organisation with a membership of 110 countries. It has 1/1 users. It was started with a membership of 17.

Each country pays capital investment and receives 14% interest on it. The revenue last year was \$411m. The Early Bird weighed 150 lbs, handled only 240 telephone calls, and one TV channel. The latest 38th orbiter launched on Jun 29, 1985, weighs 4,440 lbs and can handle 15,000 telephone calls plus two television programmes at the same time.

■ the population of the world in 1985 is estimated at 4,795.8m residing in 167 sovereign states and 54 related territories and a total of 221 places?

■ widely cited projections conclude that by the year 2025, the world will need four-and-a-half times the hydro power and three-and-a-half times the coal used today, along with a total of 365 large nuclear power plants? They typically forecast a 125% increase in energy demand over the next 40 years.

■ Italy and Spain rank highest in energy efficiency in steel manufacturing because they are major recyclers? Recycling enables producers to save up to two-thirds of the energy used to produce steel from ore.

■ for a country with only 2.9m people, Albania is a land of surprising superlatives? It is Europe's poorest nation (estimated annual per capita income of \$830); the world's most closed society and the last bastion of strict Stalinism.

STATES

Left Front's dominance in Tripura: The CPI (M)-led Left Front retained its majority in the 28-member Tripura tribal areas autonomous district council by winning 15 seats in the election held early July. The Congress (I)-Tripura Upejati Juba Samiti (TUJS) alliance took the remaining seats. The CPI (M) alone captured all the 15 seats won by the Left Front while its partners drew a blank. The TUJS won ten of the 13 seats won by the alliance.

Haryana's ecology project: The Centre has cleared a Rs 16-crore project aimed at improving Haryana's ecology. The project envisages developing a network of woodlots, water harvesting dams, plantation ponds and fodder blocks in about 300 sub-mountainous villages of Faridabad, Gurgaon and Mahendragarh districts.

Assam's formal return to normalcy: Assam CM Hiteswar Saikia on Jul 18 announced his government was revoking the Assam Disturbed Areas Act, 1955, and the Armed Forces (Special Powers) Act, 1958, with immediate effect. Saikia said the state is now "completely back on the rails" and asked everyone to cooperate with the government in ushering a new era of peace and progress in the state. The revocation will not cover the reserved forest areas of Sib-sagar, Jorhat and Karbi Anglong districts, which have been disturbed areas for the last three decades.

End of decade-old alliance in Kerala: The Muslim League on Jul 20 decided to end its decade-old alliance with the CPI (M) and quit the opposition Left Democratic Front in Kerala. The decision, ratified by the League's state working committee, was taken to protest Marxist attacks on the Muslim personal law. The League, which has four seats in the 141-member state Assembly, will function independently.

MISCELLANY

Pakistan, Uganda get top honours for human rights abuses: Torture and the use of military courts increased in Pakistan and in Uganda, the army continues to commit

atrocities and human rights abuses, the International Commission of Jurists says in a survey.

Pakistan, the continuation of martial law is disturbing, the survey said quoting Lahore reports about systematic torture in prisons there. Military courts are used increasingly to clear the backlog of cases in ordinary courts, it said. Repression continued in Pakistan against trade unions and students, and press censorship was tightened. The report also criticised discrimination against the Ahmadiya community.

DIED

Air Chief Marshal L.M. Katre, Chief of Air Staff, 58, on Jul 1 after a massive heart attack in his New Delhi official residence. Katre, acknowledged as one of the country's finest pilots of jet fighter aircraft, took over as Chief of Air Staff on Sept 4, 1984. He was commissioned in April 1945.

Pavanamma Nayudamma, 58, wife of noted scientist and former JNU Vice-Chancellor Y. Nayudamma, on Jul 1 in a Madras hospital where she was admitted with severe burns on June 23. Pavanamma attempted suicide after hearing of her husband's death in the crash of the Air India jet in the Atlantic.

Padma Bahadur Khatri, 69, former Nepalese Foreign Minister, in Kathmandu on Jul 19 after a year-long illness.

Narwaz Khan Bhutto, 27, the son of executed Pakistan President Zulfikar Ali Bhutto, in Cannes, France, on Jul 18 of unknown causes.

Mahua Roy Choudhary, 30, well-known Bengali film actress, on Jul 22 in a Calcutta hospital of burns she suffered in a kitchen mishap ten days earlier. Roy Choudhary acted in more than 50 films as the leading lady.

Rama Choudhury, 86, an eminent Sarvodaya leader and social worker besides being a close associate of Mahatma Gandhi, on Jul 22 in Cuttack, Orissa.

A. P.

KIDSTUFF

Klinik-Rundschau, the first of its kind, and certainly very unusual, is a newspaper produced by child patients at a Tuebingen hospital in the Federal Republic of Germany. Stories, cartoons, drawings and poems contributed by sick children aged between three and 14, hog *Klinik's* pages. The publication's location is made clear by drawings on the title page of the second number of a thermometer, a hypodermic needle and blood pressure apparatus.

Not all contributors can get out of bed and go to the play-room to write their contributions, paint or make line-cuts. Adults sit beside those who are bed-ridden and take down their contributions through dictation. Importance is given to the fact that nothing is "manipulated".

The newspaper stand is at the bed of a small boy 'treasurer'. Purchasers from the whole hospital must come to him to pick up a copy. *Klinik-Rundschau* has been a runaway success with 200 copies of the first issue taken up so quickly that a rush 800 extra copies had to be printed which is done free of charge in the printing office.

FESTIVAL OF INDIA

(Continued from page 16)

exhibition 'India A Festival Of Science' portrays our progress in science

Aditi

Truly representative of the diversities of the Indian way of life is the 'Aditi' exhibition currently on at the Smithsonian Institution, National Museum of Natural History, Washington. A great success with the milling American audience, 'Aditi' has been described as a "unique living exhibition of some 1,500 artefacts and 40 traditional performers, artisans and craftsmen, bringing together people and their products—contemporary and historical, regal and popular—from all over India, in a joyous celebration of life".

'Aditi' symbolises the creative force that sustains the universe and provides the skills that characterise human endeavour. Each cycle of life—from birth to death—is portrayed through folk songs, dances, rituals, designs and crafts, indicative of the close bond between artistes, craftsmen and the rhythm of daily Indian life.

To the West, exposed only to the extremes of the exotic traditions and faceless poverty of the East, the contents of Aditi present a human view of the little known India. The exhibition is a visual treat in that a host of balladeers, folk dancers, *kumharas*, potters, *dhanaks*, weavers, puppeteers, magicians, *mehndi* artistes, Madhubani artists and acrobats can be seen demonstrating their deft skills, unselfconsciously. One can wade through a flood of art objects and objects of everyday use. The exhibition attempts to answer a relevant question: "Can our craftsman modify or easily develop old products to meet the changing demands?"

Going through the calendar of the mammoth US exposition, one wonders at the enormous variety of programmes that are yet to come. There will be an Indian wildlife portfolio, Tiger, Tiger Burning Bright, at the American Museum of Natural History; exhibitions on the 'New Tantra Art'; on 'Akbar's India'; on 'Kushan Sculpture'; and an exhibition of 'Manuscripts And Books From India'. The 'film Utsav' will reel out through Los Angeles, Berkeley, Chicago, Houston, Austin and New York. A series of programmes entitled 'Salute To India' will feature The New York Philharmonic Orchestra under its director Zubin Mehta who will conduct works by Indian composers. An opera on 'Satyagraha' by Philip Glass will be presented by the New York City Opera.

Whether this cultural blitz-wrath will shake the West out of its blissful ignorance of India, it is too early to tell. But the resounding echoe of this 'Westward Ho!' will continue to reverberate throughout the globe for years to come!

DEFENCE POLICY

(Continued from page 18)

can operate from high altitude airfields and land in zero visibility conditions. It can carry 225 passengers, 145 in the lower deck and 80 in the detachable upper deck. This transport aircraft will phase out the Carribous, Dakotas, Fair Child Packets, and Avro 748. In the field of light air transport, the Dornier-228, to be manufactured under licence in India at Hindustan Aeronautics Limited in Kanpur, will replace older aircraft like Devon and the Otters.

The Indian Air Force needs a modern early warning system for detecting low flying aircraft and for guiding surface to air missiles. Additionally, SAM (Surface to Air Missiles) system needs modernisation and air defence radars are to be replaced.

Research and Development plays an important part in indigenising military production. Fortunately today we have over 40 well-equipped laboratories of the Defence Research and Development Organisation (DRDO) which are engaged in the challenging task of research and development in the fields of armaments, weapon systems, missiles, aeronautics, naval technology and electronics. 105 mm towed field guns with ammunition designed to meet the requirement of mountain, plain and desert warfare have been developed by the laboratories dealing with the design and development of armament and explosives in Pune and Chandigarh. Combat Research Vehicle Development Establishment at Avadi has incorporated latest improvements in fire-power, mobility, guidance and fire control in its prototype of the tank of '90s christened Arjun.

In the field of aeronautics, wholly indigenised jet engine capable of powering a light combat aircraft is being designed at Bangalore to meet the air force requirements. Other research laboratories at New Delhi and Dehra Dun are developing electronic, laser and electro-optic materials and systems. The research establishment at Manali has developed the know-how for avalanche forecasting and also warning systems to help the local population and units located in high altitude areas. The naval laboratories at Visakhapatnam and Cochin are developing a sonar system that compares with the best in the world. The value of production of the design projects of our defence research has already exceeded Rs 400 crores.

The ultimate objective, of course, is complete technological self-reliance so that our armed forces do not have to look over their shoulders in times of operational emergencies.

SPORTS

New Delhi dreams of holding the 1992 Olympics. But does it have the infrastructure for such a mammoth affair? An analysis of our non-runner status. And a curtain-raiser on the forthcoming Asian Athletic Meet, the FIFA Coca-Cola Cup and the Universiade.

BIDDING FOR THE OLYMPICS

BY RANJIT BHATIA

The selection of an Olympic venue is almost as complex a process as the actual organisation of the world's most important sports extravaganza. With growing political and commercial involvement in the Olympic Games, it is not surprising that there have been as many as 11 bidders for the 1992 Games for which the battle royal began, at least formally, at the 90th session of the International Olympic Committee (IOC) in East Berlin early last June.



Dress rehearsal: Samaranch (centre) watches as the Mayor of Paris explains their preparations for the Games at the Paris Pavilion in Berlin.

During the past two and a half years, ever since the IX Asian Games, there have been indications that India would also put in her claim for hosting these Olympics. In fact, there has been, for some time, a great deal of discussion on India's chances for getting the XXVI Games allotted to New Delhi, ever since the President of the IOC, Juan Antonio Samaranch made complimentary remarks about our organisational capabilities at the time of the last Asiad. It appears, however, that very little was done to put the Indian case before the voting members of the Olympic body, and at this stage one can be quite sure that New Delhi is nowhere in the running for 1992. The structural and propagandist homework that other cities have done—they carried with them video-tapes of their preparation—certainly convinces one of our non-runner status. We were probably led to believe that the infrastructure for the Asian Games would be sufficient to enable the Indian Olympic Association (IOA) stage the Summer Games of 1992. The reality of the situation would point to the contrary. In fact, New Delhi does not fulfill even half the requirements for such a mammoth task. It is one thing to host an Asiad or a Commonwealth Games, but quite another to risk holding the Olympics. The requirements for participants, be they sports people, coaches, media-experts, delegates and officials, are extraordinary and

would require a totally professional management of such an international meeting.

The main contenders for 1992, at the time of writing, are Barcelona and Paris, with Amsterdam and Birmingham also in fairly strong positions to stake their claims. Barcelona has reportedly spent as much as \$2m in promoting its case for the past two years. It has also the advantage of having fellow Spaniard Samaranch at the helm of the apex Olympic body. The IOC President may just about help Spain attain her ambition which they could not fulfill in 1924 and 1936. Close on Barcelona's heels comes Paris, whose appeal to Olympic members would be on very special grounds 1992 would, after all, signify the completion of 100 years of the Olympic movement which was inspired by French nobleman Baron De Coubertin, and formalised in Paris in 1892. Paris is also in a position to call upon the assistance of Madame Monique Berlioux, the French Olympian who lost her position as Director of the IOC at the recent East Berlin meeting. It is reported that the vital clause contained in her termination orders compels her not to be associated officially with any city bidding for the Olympics. That should, however, not prevent her from putting her compatriots through the kind of exercises that would enable them to put their case strongly enough. The Paris council for the 1992 Olympic candidacy has a budget of 14m francs, which are certainly not going to be wasted.

Amsterdam too has a formidable case in terms of its commercial sponsorship status. Birmingham, relatively speaking a late-comer, is

VIOLENT TIDINGS

Just after the violence in the European Cup final in Brussels, there has been more football violence—this time in India. The Senior Division Calcutta league match at the Salt Lake Stadium between East Bengal and Mohammedan Sporting on Jul 27 was stopped, six minutes before the final whistle, due to incessant brickbating and fighting by rival supporters. East Bengal were then leading 2-1 and Mohammedan Sporting officials refused to continue the match owing to the incessant barrage of missiles. After consulting the referee's report, the Indian Football Association had a special meeting a fortnight later and awarded the match to East Bengal.

Mohammedan Sporting have refused to play any more matches at Salt Lake as they feel the West Bengal police posted there are partisan. However, the CM Jyoti Basu has been able to persuade them to play later.

N.K.

relying on the British reputation for quality organisation of all sports activity in purely technical terms. Lower down the list comes Brisbane in Australia with somewhat modest pretensions. Compared to all these, New Delhi's may well be a lost case. Yet another factor that may go against India is the fact that the 1988 Games are to be staged in Seoul, South Korea, and promise to be the most extravagant in the history of the Olympics. After the Asian effort, it may logically be the turn of another continent, and a city with as well-coordinated plans as Seoul.

Looking at it in realistic terms, it would not be easy for India to hold an Olympics in the next five to 10 years. An interesting and equally useful exercise might be to hold the Commonwealth Games or even the Universiade.

AROUND THE TRACK IN 30 DAYS

Basketball

Pro-basketball at its best is seen in the National Basketball Association (NBA) league in the US. This year's final, played at the Boston Garden, was between the two great teams Boston Celtics and Los Angeles Lakers—the latter fielding the legendary Kareem Abdul-Jabbar (original name Lew Alcindor) now 38 years old. Although history was against Lakers, as they had not won even one of the eight finals played against the Celtics, yet they took the title back to L.A. with a fine 111-100 pts win.

Athletics

On Jul 21, 1985, at the Grand Prix Track and Field Meet at London's Crystal Palace Stadium, Mary Decker Slaney, meeting Zola Budd, for the first time in a race since their collision at the Olympics 11 months ago, clocked the fastest 3,000-mile of this year in just 8:32.71. The South African born Zola trailed a distant fourth. The previous best for this year, set up by Cornelia Burki of Switzerland, was 8:40.10.

Badminton

The most prestigious of the three tournaments in the Orient, the Indonesian Open (ending on Jul 28 at Jakarta) was once again a triumph for the Chinese.

Results: Men's Singles: Han Jian (China) b Xu Biao (China) 15-4, 15-3; **Doubles:** Liem Swie King & Kartono (Indonesia) b Tien Bingyi & Li Yongbo (China) 15-5, 15-10.

Women's Singles: Li Ling Wei (China) b Han Aiping (China) 11-9, 11-9; **Doubles:** Li Ling Wei & Han Aiping b Rosiana Tendean & Ivana Lie (Indonesia) 15-7, 15-8; **Mixed Doubles:** Martin Dew & Gillian Gilks (England) b Nigel Tier & Gillian Gowers (England) 15-2, 15-9.

Cricket

The Third and Fourth Tests between England and Australia, played at Nottingham and Old Trafford respectively, ended in a draw—thus making the Ashes series 1-all with two to go.

One of the three limited-overs competitions for English counties was decided on Jul 20 at Lord's, London, when the Benson & Hedges Cup (for 55-overs matches) final was won by Leicestershire.

The All-England Lawn Tennis Championships, considered the premier event in tennis circles, ended at Wimbledon in London, on Jul 7.

Results: Men's Singles: Boris Becker (FRG) b Kevin Curren (USA) 6-3, 6-7, 7-6, 6-3.

Doubles: Heinz Gunthard (Switz) and Balazs Taroczy (Hungary) b Pat Cash & John Fitzgerald (Aus) 6-4, 6-3, 4-6, 6-3.

Women's Singles: Martina Navratilova (USA) b Chris Evert Lloyd (USA) 4-6, 6-3, 6-2.

RECORDS OF THE MONTH



Cram: Put his best foot forward in 1,500 m at the Nice track.

Men: Pole vault: 6.00 m Sergei Bubka (USSR); **1,500 m:** 3:29.67 Steve Cram (GBR); **mile:** 3:46.30 Cram (GBR); **5,000 m:** 13:00.40 Said Aouita (Morocco).

Women: 10,000 m: 30:59.42 Ingrid Kristiansen (Norway).

Cram, the World, European and Commonwealth Games champion, became the first to go under 3:30.0 for the 1,500 m. In fact, Aouita was close behind Cram, and his time of 3:29.71 also beat the old record (3:30.77) by Steve Ovett in 1983.

Doubles: Kathy Jordan (USA) & Elisabeth Sayers-Smylie (Aus) b Martina & Pam Shriver (USA) 5-7, 6-3, 6-4. **Mixed Doubles:** Paul McNamee (Aus) & Martina b Fitzgerald and Elisabeth 7-5, 4-6, 6-2.

India lost to Sweden 1-4 in the Davis Cup quarter-finals played in Bangalore from Aug 2-6. Vijay Amritraj lost to Anders Jarryd 6-3, 5-7, 2-3, 6-4. Mats Wilander b Ramesh Krishnan 6-3, 6-3, 6-2. In the doubles tie, Jarryd & Stefan Edberg b Vijay and Anand 21-9, 2-6, 6-3, 6-4. In the reverse singles Vijay lost to Wilander, the world No. 3, 8-6, 9-7 while Krishnan lost to Jarryd, world No. 8, 3-6, 6-4, 1-6.

SANJEEV GUPTA

SPORTSTARS OF THE MONTH

Boris Becker—► is only in his second year on the circuit. ► is the youngest to win the Wimbledon, being 17 years, 7 months and 7 days old (he won on the 7th day of the 7th month). ► is the only unseeded player to win the title. ► is the first German to win the title and only the third to reach the final. Earlier ones being i) Gottfried von Cramm who lost in three consecutive years 1934 and 1935 to Fred Perry and 1936 to Donald Budge. ii) Wilhelm Bungert in 1967 who lost to John Newcombe. ► is younger than the winner of the Junior Wimbledon title, 18-year-old Leonardo Lavalle of Mexico.

Kevin Curren—the South African born, who acquired US citizenship in March this year, was seeded 8th in Wimbledon. But created the greatest sensation by first defeating defending champion and seed No. 1 John McEnroe (USA) 6-2, 6-3, 6-4 in the quarter-finals and then Jimmy Connors (USA) 6-2, 6-2, 6-1 in

the semis.

John McEnroe did not reach the Wimbledon final this year, after his five consecutive appearances. Losing to Bjorn Borg in 1980 and Connors in 1982, he won in 1981, '83 and 84.

Ian Botham hit the fastest century of the summer in just 50 balls for his county Somerset at Edgbaston against Warwickshire. His 100 came from only 26 scoring strokes and easily broke his own record for the season. He previously struck two centuries in 76 balls against Hampshire and Glamorgan.

Geet Sethi, at 24, became the youngest (and unseeded) player ever to win the World Amateur Billiards Championships in his maiden appearance when he beat veteran and four-time title-holder Bob Marshall (75) of Australia 3809-2453 in New Delhi on Aug 7. Reigning champion (and thrice consecutive holder of the title) Michael Ferreira lost to Sethi in the semis.

ASIAN ATHLETIC MEET

The progress of the Asian Athletic Championships, instituted a decade and a half ago, has gone hand in hand with that of the World Cup and World Championships, in track and field events. Prior to them, the Olympics was the main forum for international athletics, and for obvious reasons, the Asian Games for the sport in the Asian region. With the Asian Championships becoming the selection meet for the Asia squad in the World Cup, member nations have begun to take it much more seriously than they used to. Looked at in this way, the coming meeting in Jakarta is likely to provide the stiffest competition in Asian athletics.

It has been accepted for some time now that Asian athletes have lagged behind international stars because they do not get sufficient exposure to big-time competition. In the not-so-distant past, Japan was the sole exception since its athletes were able to compete in Europe and America each summer. Because of this advantage, it did not take the Asian Championships too seriously since the level of competition was somewhat lower than that in the Asian Games; also, there was little prestige involved in winning medals here. All that appears to have changed since the last Asian meet in Kuwait, when China and Taiwan managed to dominate the scene and put the Japan second-string entries in their place. In fact, the Chinese men and women have gone from strength to strength since the last Asian. To a lesser extent, the same was true of the Koreans (North and South), the Thais and the Filipinos.

With tougher competition becoming the order of the day in the Asian Athletics Championships, it was not surprising that India, once the leaders in the sport in the continent, had to take a back seat. Suresh Yadav (1,500 m), Chand Ram (20-km walk) and P.T. Usha (400 m) were the only Indian winners at Kuwait—a fact that gave much cause for concern. The Jakarta meeting is to be the final fling for most hopefuls for the next Asian Games in Seoul, barely a year away. And there is every indication that Asian leaders, China and Japan, will

find their current athletic supremacy challenged by hosts South Korea, who at the time of writing have already selected their squad for 1986. India's hopes would lie mainly in the women's events, with Olympic 400 m hurdles finalist P.T. Usha leading the list. Half-miler Shiny Abraham continues to perform consistently and should get a medal. Suman Rawat would go all out to emulate predecessor Gita Zutshi in the 1,500 m or the 3,000 m. The Indian 4x400 m relay team which reached the finals in the 1984 Olympics is formidable enough to record a win. The women's squad will almost certainly field marathoner Asha Agarwal, who should give a good account of herself. In the men's section Raj Kumar (5,000 m), Charanjit Bajwa (400 m), Bagicha Singh (1,500 m) and Balwinder Singh (shot put) are possible medallists.

The Asian Athletic Federation has already announced that all winners at Jakarta would be selected to represent Asia in the World Cup at Canberra, Australia in October when sports enthusiasts will see an exciting battle for supremacy between the US, USSR and the GDR.

R.B.

5th WORLD YOUTH FOOTBALL TOURNAMENT

The 5th World Youth football tournament will commence in USSR on Aug 25. The final is slated for Sep 7. Popularly known as the Junior World Cup, this championship is played after every two years for the FIFA-Coca Cola Cup. The popular soft drink Coca Cola sponsors all of FIFA's (the governing body of world football) developmental and promotional programmes. Part of the agreement is the sponsorship of the Junior World Cup, held for players below 19 years of age. This tournament was the brain-child of the current FIFA President, Joao Havelange of Brazil.

The importance of this tournament is twofold. Firstly, it enables talented young teenagers players in all countries to participate in a world championship, get valuable match experience and familiarity with the exacting rigours of international football. Secondly, the

A NEW GOAL

For the first time in the history of football an African nation has won an international tournament. Nigeria won the recently concluded FIFA's first under-16 world tournament in China. In the finals, Nigeria beat fancied West Germany 2-0. In fact, this is the first time any nation outside Europe or South America has won an international football tournament.

Nigeria's triumph is a vindication of FIFA President Joao Havelange's faith in encouraging football talent in Africa and Asia by integrating the young into big competitions. The FIFA under-16 tournament, sponsored by KODAK, was Havelange's brainchild. African nations excelled in this tournament; unfancied Guinea reached the semi-finals losing via the tie-breaker to holders Nigeria. This indicates that there is a wealth of untapped football talent in Africa and the European-South American hegemony of the game may be challenged by the next decade. N.K.



Above: The best man wins: Jarryd proved too much for Vijay. Left: Not good enough: Wilander lost to veteran Vijay.

tournament is usually held in developing countries or places where the game is not very popular, so that the populace of these countries can witness quality football. The previous four Junior World Cups were held in Tunisia (1977), Japan (1979), Australia (1981) and Mexico (1983).

To qualify for the Junior World Cup proper, qualifying rounds are held on a regional basis in all the continents. So even countries like India, who have never qualified for the cup, can get international experience by participating in the Asian zonal competitions. Sixteen teams participate in the final rounds of the cup. They are divided into four groups of four. In the preliminary phase, matches are held on a round-robin league basis. The top two teams from each group qualify for the quarter-finals. From this stage onwards, the championship is played on a knock-out basis.

A significant feature of the Junior World Cup has been that Asian countries have fared quite creditably and have done much better than in the senior championships. In 1979, unknown and unfancied Qatar created a sensation when they entered the final, beating fancied teams like England and Brazil. They lost in the final 1-4 to powerful West Germany, but became the first Asian nation to reach the final of a

major international soccer competition. Again in 1983, South Korea entered the semi-finals where they lost to the ultimate winners Brazil 1-2.

India have never entered the final phase of the Junior World Cup, always getting eliminated in the regional competitions.

Each Junior World Cup unearths young footballers of exciting skills and great talent. Diego Maradona (Argentina), the costliest football player in the world at present, really came into the limelight at the 1979 Junior World Cup, as did Ramon Diaz, also of Argentina. These two players were the top scorers of the tournament, responsible for Argentina's ultimate victory. In the 1983 cup, Brazil emerged champions and two of their players, striker Casagrande and winger Reinato are now regulars in the senior team. The 1985 Junior World Cup in USSR will as always help in the discovery of players of potential.

Except for the main World Cup, the FIFA-Coca Cola Cup is the most popular international competition, with greater media coverage and spectator interest than even the Olympic football competition. The game is always very keen and not so defensive since the teenaged players are not so cynical and conscious of defeat.

So far, USSR (1977), Argentina (1979),

HOCKEY POLITICS

M.A.M. Ramaswamy is back as **President** of the Indian Hockey Federation (IHF) after an interval of seven years. He had successfully held the post between 1974 and 1978, during which time India won the Kuala Lumpur World Cup and Moscow Olympics.

It was a fiercely contested election with, at one stage, eight big names coveting the prestigious seat of power. Some of those in the running were Buta Singh, Union Minister for Agriculture, Arun Singh, MP, K.S. Dhillon, Director-General of Police, Inder Mohan Mahajan, controversial former President of the IHF, Aslam Sher Khan, former hockey player and Congress(I) MP. The contestants whittled down to two in the final lap—Ramaswamy, the racing mogul, and Dhillon.

Traditionally, hockey has been controlled by police officers from the north. For the last two

years, the IHF had an interim President, Raja Bhalender Singh, with elections being postponed because of factionalism, pressure tactics and flimsy reasons. Interest in the game has mounted because suddenly due to exhibition matches with Pakistan in the Gulf region, a lot of money has flowed in. Besides, politicians and bureaucrats have always wanted to hog the limelight through controlling sports federations. And sports officials encourage this as an influential person at the top means easy access to State aid.

The sordid politics of this election, however, were redeemed when, in a sporting gesture, the defeated Dhillon proposed that the new President be allowed to select the other office-bearers. Ramaswamy reciprocated by naming Dhillon as one of the vice-presidents. And so all's well that ends well.

WORLD UNIVERSITY GAMES

A major sports extravaganza, in fact, a mini Olympics, is being staged in Japan this year. The event is the World University Games (Universiade) being held in Kobe (Japan) from Aug 24 to Sep 4. University students from countries all over the world will participate in the Universiade, held after every two years.

The schedule of the World University Games includes mandatory disciplines (for both men and women) like athletics, basketball, fencing, gymnastics, judo, swimming, diving, water-polo, tennis and volleyball. Football has been included as a mandatory discipline, for the first time, with effect from this year.

As there were many entries in football, the International University Sports Federation (FISU), under whose auspices this competition is being organised, divided the competing teams into four zones on a geographical basis—Africa, Asia, America and Europe. A total of 14 teams—two from the African zone, three from the American zone, four from the Asian zone and five from the European zone—have qualified for the main competition of football at Kobe.

India participated in the preliminary rounds of the Asian zone. They were placed in subgroup 2 and their opponents were China. In contrast to the well-prepared Chinese team, the Indian Universities team appeared a shoddy outfit. In spite of enjoying home ground advantage, India lost the match to China by 1-7.

At the Universiade this year, India is expected to send a small contingent of athletes and maybe a volleyball team. On previous occasions, India have participated in athletics and tennis at the Universiade. We have yet to win a medal here. Standards at the Universiade are very high as colleges are the breeding grounds of Olympic champions (Edwin Moses and Salnikov to name a few), both in the US and in the East European bloc of nations. With present and future Olympic champions participating in nearly all sports at the Universiade, India's medals prospects are remote. N.K.

Should Pavement Dwellers Be Evicted?

On Jul 10, 1985, a five-judge Constitution bench presided over by the then Chief Justice of India, Y.V. Chandrachud, sealed the fate of 47 lakh pavement and slum-dwellers in Bombay by ruling that "the dwellers had no Fundamental Right to encroach upon any place reserved or earmarked for public purposes". The landmark judgment, with wide-ranging ramifications, set the stage for heated debates on the sensitive question involving the survival of 47 lakh humans.

Meanwhile, the slum-dwellers, who will be directly affected by the verdict in November, are bracing themselves to face the worst. To them the fuss over the Supreme Court decision is just a 'much ado about nothing'. For, even without adverse court judgments, the poor folk are used to being harassed and bullied by the city police and surely this judgment cannot worsen matters. However, parts of the 78-page judgment hold out promises which, if kept, could dramatically improve their living conditions.

In the light of this judgment arguments in favour of and against the slum-dwellers continuing to live on the pavements.

For

■ The Constitution bestows upon all citizens the right to reside, settle and carry on business in any part of the country. But it does not allow them to encroach upon public land. Such encroachment cannot be permitted, essentially because a situation in which no legal sanction is required to acquire and utilise public property can lead to serious and widespread civil disorder.

■ Pavements are public property. The main purpose is to ensure that pedestrians are able to move about with a measure of safety and security. Besides, the public shares with the dwellers the right to use pavements, and encroachment of any kind can endanger the general public's right to life. By occupying pavements the dwellers force the pedestrians to walk on busy roads exposing them to accidents. If demolitions seem to deny the dwellers' right to life, then letting them stay on infringes on the pedestrians' right to life.

■ The livelihood of the dwellers will be disturbed only if they are deported from the city. If the government resettles them within the city, as per the Supreme Court order, then their livelihood will not be disrupted. This argument is based on a study conducted on occupational patterns of slum and pavement dwellers by Dr P.K. Muttagi, Tata Institute of Social Studies. According to the study, 53% of (male) pavement dwellers are self-employed while 38% earn a wage as casual labourers. Thus the work of 91% of Bombay's dwellers is not linked to the place where they live. But the earnings of most men is erratic and insufficient even to feed the family for a month. The women chip in with a regular input that ultimately sustains the family. Most of the pavement women work as domestic servants in high-rise buildings that run adjacent to the pavement. So their work does have some relationship with their place of living. However, women in regularised slums, with access to water and electricity and with a larger living space, participate in home-based industries. In the same way, concluded Muttagi, the evicted women who are resettled could find this kind of alternative employment.

■ The purpose of demolitions need not always be destructive. In concert with suitable rehabilitation programmes, demolitions can, in fact, serve a constructive social end. Most cities facing the slum problem have sufficient vacant land to rehabilitate all their unauthorised dwellers, though, due to court cases, it is only in Bombay that facts about such resources have been closely documented. In Bombay there are 2,952 hectares of vacant land which can accommodate an estimated 12 lakh huts housing 60 lakh people (five people to a hut). So, if the city has the will and the workable schemes, then there is enough land to resettle all the dwellers. In Bombay, the schemes are also there. Of these, the World Bank aided projects are most notable. Under the first scheme called the sites and service scheme 85,000 dwellings with basic amenities such as latrines, water supply, and electricity

Against

■ Eviction of pavement dwellers violates one of the basic tenets of the Indian Constitution's Fundamental Rights. It is the Fundamental Right of every citizen to live and earn his livelihood in any part of the country. By evicting pavement dwellers the state denies them this right. Once removed from their hutments the dwellers will be forced to leave the city, for they have no other refuge. Forcing a citizen to leave a city, directly or indirectly, is a violation of his Fundamental Rights.

■ The Supreme Court has itself agreed that right to life includes "adequate nutrition, clothing and shelter". The only shelter the dweller has is the hut on the pavement. Therefore, by removing these dwellings his right to life is threatened. The court had also ruled that a citizen can be deprived of his shelter only by actions that strictly conform to just, fair and reasonable procedures of law. But is it easy to ensure that the actions will in fact be just? The BMC's demolitions were, for instance, not merely unfair, they were inhuman. In violation of human rights, the BMC, in collusion with the Bombay police, picked a particularly wet monsoon day in July 1981 to raze down thousands of hutments and send their hapless inmates packing to places from where they had come. Against this background can we be expected to have unbending faith in the fair-mindedness of law enforcement agencies when they deal with slum-dwellers in the future?

■ Right to life is also tied up with right to livelihood. Hounded out of villages by acute poverty, people move to cities seeking employment. They live in a city because they are employed in the city and they live on pavements because they have no other accommodation. The eviction of these people will lead to deprivation of their livelihood and, consequently, to the deprivation of their life. For eviction results in loss of jobs, starvation, disease and death; and the discretionary powers vested with agencies like the BMC cannot be used in disregard of the nexus between life and livelihood. Moreover, if these hutments are uprooted from the city it is not only they, but also the industries and offices that employ them, that will suffer.

■ Demolitions are, moreover, destructive and futile in nature. The slum-dwellers have got inured to living stoically under the most hostile conditions. Nearly all of them have grittily faced demolition at least once in their lives and lost most of their possessions. And though all these demolitions overlooked the natural justice of giving notice, the dwellers reappeared on other pavements—underlining the futility of such actions. In the wake of the Supreme Court judgment if they are evicted they will, to be sure, reappear. It is all very heart warming to hear about schemes that have been designed to resettle the urban poor. But, in the face of greed, corruption and mismanagement, they will fall just as the earlier schemes have fallen. At any rate, it is wrong to evict

(Continued on page 61)

CURRENT EVENTS: International (Continued from page 25)

the Saudis proposed a 7-10% reduction in the production of other member countries to make room for more Saudi oil in the market; but the proposal was rejected. Mexico, which is not a member of OPEC, but has long followed a policy of adhering to OPEC's pricing decisions to bring stability to the market, further complicated matters by slashing its crude prices by an average of \$1.24 a barrel. This led to a downward pressure on the market and further weakened OPEC's influence.

However, in Geneva, the cartel agreed to cut 50 cents a barrel from the price of its heavy crudes and 20 cents a barrel from that of its medium crudes. The deal on price differentials has given Saudi Arabia some scope to increase its production without making good its threat to match the other OPEC-members' discounts. The question of revising quotas was not discussed; but it will be, later this year.

BY S.B. & A.N.

KAMPUCHEA

THE AMERICAN CONNECTION

Recently, the US Secretary of State, George Shultz, visited Kampuchean refugee camps on the Thai-Kampuchean border. He also attended a briefing by Thai military officials about two and a half miles from Kampuchea. The fact that American involvement in the Kampuchean problem was increasing was proved by another event: the US House of Representatives approved \$5m in economic or military aid for non-communist Kampuchean resistance groups. During his visit to Thailand and Malaysia, Shultz also held consultations with the foreign ministers of the Association of South East Asian Nations (ASEAN) in Kuala Lumpur and endorsed the group's latest initiatives for a negotiated settlement of the Kampuchean issue. However, the endorsement was symbolic because Vietnam has already rebuffed the move.

This was ASEAN's 13th initiative since 1979. Earlier Malaya had proposed talks between the three Kampuchean resistance movements, Son Sann's Khmer People's National Liberation Front, Prince Norodom Sihanouk's Sihanoukist National Army and Pol Pot's Khmer Rouge, and delegates of Heng Samrin's Vietnamese-backed government at a neutral site, through an interlocutor. The Malaysian plan failed to draw support and ASEAN then proposed that Vietnam should be the negotiating partner and it could include members of the Heng Samrin regime in its delegation. Washington agreed to this plan but Hanoi has ruled it out.

According to the Indonesian Foreign Minister, Mochtar Kusumaatmadja, Hanoi would sing a different tune if its relations with the US were

better. He has been acting as an intermediary for the ASEAN for some time and has been trying to persuade Hanoi to move closer to Washington. The main problem is that while Vietnam wants to normalise relations without withdrawing from Kampuchea, the US insists that normalisation can only occur after a Vietnamese withdrawal. Hanoi recently pledged to return the remains of 28 American soldiers missing since the Vietnam war, but this did not cut any ice with the Americans. In fact, Shultz warned Kusumaatmadja at Kuala Lumpur that he should not go too far and added "we don't think the US policy can be put in somebody else's hands to work with".

UN DECADE FOR WOMEN

EVE ON THE MARCH

1985 marks the end of the UN Decade for Women; they came to Nairobi from all over the world—10,000 of them from some 160 nations—to participate in a two-phase conference to mark the end of the decade. It began with Forum '85, a meeting of non-governmental organisations (NGOs), from around the world, and the agenda offered many events, from music recitals and meditation classes to panel discussions on wife-beating, incest and the Iran-Iraq war.

The meeting of the NGOs went smoothly enough but the second phase, the official UN conference, was less harmonious. The meeting was designed to assess the status of women in the past decade and also to draw up a strategy for the future. But politics dominated the proceedings. Arab and Israeli women confronted each other; the Soviet Union and its allies attacked the US; Filipino women protested against the Reagan and Marcos Administrations, women from Afghanistan attacked Washington for supporting a 'genocidal war' against its Soviet-backed government; the Vietnamese Minister of Education, Nguyen Thi Binh, too, accused the Americans of fomenting war around the world; and the US delegation and its leader, Maureen Reagan retaliated to all these charges. In spite of all these wranglings, however, a message of hope came out of the conference and its final paper, *Forward Looking Strategies*.

However, despite the decade's notable advances, there are still lingering inequalities, and it is only through a conscious struggle that these must be overcome. While literacy and life expectancy rates have gone up, women in developing countries still have a life expectancy which is 15 years less than that of developed countries. The UN Decade for Women played a positive role in focussing attention on women's problems and 90% of the world's governments now have organisations to promote the advancement of women.

CURRENT EVENTS: National (Continued from page 22)

policies providing incentives for major industries like electronics, computers, pharmaceuticals, textiles, steel and cement have given a phenomenal boost to the private sector. Then the liberal three-year import policy, exemption of over 500 medium sized companies from the Monopolies and Restrictive Trade Practices (MRTP) Act, delicensing of several others and diversification in specified industries too have contributed significantly to this boost, resulting in considerable improvement in profitability of most firms and market leaders. These factors coupled with the onset of favourable monsoons is responsible for optimism in the private corporate sector.

The unabated rise in share prices is, however, viewed as an unhealthy trend too. The shortage of adequate floating stocks has resulted in a frenzied scramble for available shares. Also, substantial tax cuts in the budget have caused an influx of more investable money in the market causing the sky-rocketing of share prices. And keeping these facts in mind the need for regulatory measures for share markets has become crucial.

SUGAR PRICES

SOARING HIGH

For people with a sweet tooth, the news from the sugar markets is not particularly toothsome. In recent weeks the price of sugar has scaled dizzy heights. In Bombay the wholesale price shot up from Rs 565-568 per quintal during end-May 1985 to Rs 685-694 per quintal during end-June. The prices at the moment are hovering around

a new high of Rs 800 per quintal. And while the prices spurted, the supplies dwindled, with a mere 2.50 lakh tonnes and 2 lakh tonnes of indigenous sugar being released during June and July as against 3.60 lakh tonnes in May. And although the free market sale quota was maintained at 3.75 lakh tonnes in both June and July, the availability, in actual fact, was much less.

Sugar prices have, in fact, been soaring ever since the current season got underway in October 1984. This rise can be attributed to several factors. First, consumption of sugar has registered a steady increase and has practically doubled during the period of the Sixth Plan alone. The estimated total consumption of 85 lakh tonnes in the current year is a sharp increase of 12.8% over the previous year. Second, the increase in consumption has not been accompanied by increased production. On the contrary, sugar production has exhibited sharp fluctuations and has registered a decline during the past two years. Third, the government has maintained a high order of release which has resulted in a drastic fall in sugar stocks. This high order of monthly releases in the face of fast declining output and stocks has compounded the problem, for, far from checking the prices, this has forced the country to import large quantities of the sweetener. Finally, bottlenecks in distribution of imported stock has led to an unprecedented flare-up of sugar price in June/July.

Keeping in view the stagnant output, the steadily increasing consumption and the fast depleting stocks of sugar, the government has decided to import 10 lakh tonnes during the current season. For the estimated 85 lakh tonnes consumption as against the 95 lakh tonnes availability, of which 62 lakh tonnes is domestic output, 23 lakh tonnes are carry over stocks and 10 lakh tonnes is imports, will result in a critical position in September when the stock position will be a mere 10 lakh tonnes.

PERSONALITY DEVELOPMENT

Preparing For An Interview-2

The personal interview of a candidate essentially involves the technique of judging him from three vital angles—his personality, qualifications and hobbies. This approach helps in adding credibility to his resumé.

Having discussed the preliminary stage of knowing yourself' (CCTimes, Aug '85) as part of the strategy of preparing for an interview, let us go on to analyse the three vital stages that will see you through any interview.

The technique of selecting suitable and efficient personnel to man responsible positions in the government, educational fields, business houses and in the armed forces has assumed increased importance in modern times. Today, with each university giving discriminating weightage to a candidate's performance, marks as a criterion in job selection is fast losing its relevance. Today, the appointing authority of a business house or the government can hardly be convinced by an array of first class academic qualifications decorating a candidate's resumé. It is his personality, initiative, presence of mind and depth of knowledge, displayed before the interview board, that adds credibility to the broad picture of himself portrayed in the resumé.

The interview process comprises three broad stages of assessing the candidate's level of knowledge and ability, viz. (a) the introductory process of knowing the candidate as a person; (b) the secondary process of rating his basic knowledge of his subject of specialisation and his capacity to relate such knowledge to practical life; and (c) the winding up process of assessing the broader aspects of his personality by gauging his interests and hobbies.

Introductory Process

In the initial stage of the interview the board members try to make the candidate feel at home. The discussion commences

informally with an encouraging question on the candidate's name itself, particularly if it happens to be rather unusual like Mandakini, Shaligram or Gargi Mohapatra. But 'What's in a name?', one may ask. A person's name often reminds us of historical or mythological figures and at times brings to light the little known facts about well-known things. Hence, it is essential for an interviewee to know the significance of his own name.

The interviewer usually begins with a general statement like—

"So you are Mr S. Gopal. That's a nice short name!" (This would give the interviewee enough time to stop shaking and for his pulse rate to normalise so that he can face the next question which might be based on his name itself.)

Q: Mr S. Gopal, could you please tell us what 'S' stands for?

A: Sir, I am a south Indian hailing from Tamil Nadu. We south Indians usually prefix our name with the first letter of our father's name. My father was T.P. Subramania Iyer, where T and P stand for Thiruvarur Picchu which is my great-grandfather's name. Earlier, it was the general practice to prefix a man's name with the first letter of his place of domicile or place of birth. Hence my father Subramania Iyer was the son of Picchu Iyer who hailed from Thiruvarur.

Q: Could you elaborate on the origin of your own name, 'Gopal'?

A: Gopal is one of the several names Lord Krishna is known by. Lord Krishna is one of the 10 incarnations of Vishnu, who according to Hindu mythology, is the preserver of this vast universe.

There are a countless number of stories based on the life of Lord Krishna, the most famous being his role as charioteer and advisor to Arjun in the imminent Mahabharata war between the Pandavas and the Kauravas. When Arjun was depressed and hesitated to wage a war against his own kinsmen, Krishna assured

him that it was his duty to uphold justice and truth and to suppress evil. Non-violence was a lofty ideal but so long as the forces of violence remained active, they had to be met with force. Krishna's enlightening advice to Arjun forms the basis of the Bhagavad Gita.

This answer may possibly lead to a question like the following

Q. Do you think you can live up to such principles in practice?

A. Well, I do my best to fight for justice when I come across people accepting unfair treatment particularly in their dealings with the public utility services like buses, telephones and water.

Having tested the candidate's penchant for in-depth information and knowledge, the interviewers normally move on to the more relevant part of the interview—the candidate's education. Despite the fact that the candidate's educational qualifications are recorded in the application form, the questions put are mainly based on such information itself.

There might even be a ticklish question like the following for which a firm answer is expected from the candidate.

Q. Why did you choose to take up English as your main subject in college after doing Science in school?

A. At school I was good in my Science subjects. But I could not score high in Mathematics. As I was always interested in the English language, I decided to specialise in it.

Such questions in slightly varied form can be put to candidates who have specialised in other subjects like Economics, Political Science, History, etc., depending on the nature of the job.

Having crossed these initial stages of the interview, the candidate is made to take off to the secondary stage where his mastery of the subject of his study is tested.

P.G.

(To be continued)

(Continued from page 59)

For

ty, are to be raised by the end of next year. The second scheme will focus on upgrading existing slums to more human levels.

The Supreme Court made a special reference to these two projects and also to the various other slum housing and rural employment schemes detailed by the Bombay Municipal Corporation (BMC) in its defence, before giving the verdict. The point to be noted is that if appropriate conditions exist (land, resettlement schemes, etc), demolitions can lead to positive social change and, therefore, they cannot be deemed unjust.

Against

the dwellers on the presumption that alternate accommodation will be given. Such a step, in fact, should precede the evictions. It is only then that they can serve a social purpose. The Supreme Court in its verdict asks the state to rehabilitate the dwellers but sets no time-frame for doing so. And when we consider the recent shady deal in which 23,000 sq m of land meant for rehabilitating slum-dwellers in Bombay was sold to a builder for Rs 10.73 crores, it seems all the more reasonable to doubt the veracity of such a presumption.

CAREER NEWS

Essay & Photo Competition

If you like to go places, can shoot and write, you are in for a challenge. The Indian Institute of Tourism and Travel Management invites entries for an Essay and Photo competition on tourism.

If you are in the 16-21 age-group you may start digging in material for a 1500-3000 word essay on any one of the following subjects: i) Contribution of tourism to the Indian society ii) Tourism—a vehicle of international understanding and national integration; iii) Parameters of domestic tourism in India; iv) How to promote youth travel in India; v) How to motivate people to travel; vi) Travel and tourism in India through the ages.

The essay may be handwritten or typewritten and should be signed at the end by the competitor with a certificate that the essay is his/her original work.

And for the photo competition you may send in a picture of a place of tourist or historic interest on Indian wildlife, in the size 18 x 12½ cm. Of course the photograph ought not to have been published earlier. Both competitions carry three attractive prizes (for details please see *TOI*, Aug 13, 1985.)

Entries may be sent to the Director, Indian Institute of Tourism & Travel Management, Room No 406, Outab Hostel, Off Sri Aurobindo Marg, New Delhi-110 016, alongwith a crossed IPO for Rs 5 as entry fee payable at New Delhi Post Office and a certifi-

cate of proof in support of age. SC/ST candidates are exempted from this fee if accompanied by a certificate from the proper authority.

Entries should reach the institute not later than Sep 12, 1985.

Flying High

Are you single, young and feminine? Do you dream about hovering amidst the heavenly clouds? But, are you also in search of a paying career that would let you into nothing less exciting than globe-trotting? Well, then, beware! You are perhaps on the wanted list of the British Airways.

The British Airways is in search of young women whom they can appoint as Indian Air Stewardesses. However, a few tough eligibility conditions are to be met. One has to be single (21-24 years), 160 cm in height with proportionate weight and have an excellent health record; be attractive with a pleasant appearance and a friendly personality; be a graduate from a recognised university; have a clear diction with fluency in English and Hindi and preferably have conversational fluency in Gujarati or Punjabi and/or Bengali; and be prepared to be based at Bombay or Delhi.

If you fulfill the above, you may send in a hand-written application alongwith a full-length postcard size photograph of yourself in a saree before Sep 3, 1985 to The Administrative Officer (Air Stewardesses) India, British Airways, 202B Vir Narman Road, Churchgate, Bombay-400 020. For further details, please see *TOI*, Aug 13, 1985

For these unmarried Indian citizens aged 18 to 27 who possess a good undergraduate degree, initiative and enterprise, the Inlaks Foundation offers two different scholarships.

The first involves specific projects, research or study-oriented travel, professional programmes and non-degree courses. The second leads to under-graduate or graduate courses in all subjects offered at Cambridge, Harvard Law School, Imperial College (London), London School of Economics, Oxford and Royal College of Art. Or graduate courses in any subject offered by any American and European university, for which candidates have secured admission before applying.

For details and application form, send a 10x23 cm self-addressed envelope with an 85-paise stamp to Inlaks Scholarships, P.O. Box No. 2108, Delhi-110 007. Last date for receipt of completed applications is Aug 31, 1985.

Cambridge Nehru Scholarships

For those who intend pursuing a course of research at Cambridge, leading to a Ph.D. degree, 10 prestigious full-cost scholarships are being awarded by the Nehru Trust for Cambridge University.

Details, preliminary application forms can be obtained before Aug 30, 1985 from the Joint Secretary, Nehru Trust for Cambridge University, No. 10, Janpath, New Delhi-110 001. Completed applications must be sent to the above not later than Sep 20, 1985.

Answers to

TEST YOUR WORD POWER

- barren**: D: unfruitful; not good enough to produce crops; sterile. The black women of South Africa, deprived of basic citizenship rights and consigned to barren 'homelands' by their white government, have no legal redress.
- berth**: B: to provide with a place to dock or moor. New Zealand PM David Lange has been at loggerheads with the US over his refusal to allow nuclear-armed US warships to berth in his country.
- coeval**: B: contemporary; belonging to the same age, time or era. Soviet experts are of the opinion that kids with a swimming experience are much healthier and more physically fit than their untrained coevals.
- confluence**: D: place where two rivers unite. Perched on a buff above the confluence of the Yangtze and Jialing rivers, the old city of Chongqing in China appears to some visitors to resemble the superstructure of a large ship.
- debacle**: D: sudden and great disaster; utter collapse, downfall. Ten years after the fall of Saigon, the debacle in South-East Asia remains a subject many Americans would rather not discuss.
- ebullient**: C: high-spirited; exuberant; full of life and vigour. Punjabi Hindus are every bit as go-ahead, ebullient and assertive as the Sikhs.
- expatriate**: D: person living outside his own country. While expatriate Americans revel in the dollar's dazzling performance, they are also well aware that their sudden windfall could quickly disappear.
- filthy**: C: disgustingly dirty; unclean; foul. The lowermost stretch of the Ganga in West Bengal, the Bhagirathi-Hooghly is now a filthy drain into which seven municipalities and a host of industries pour 3,79,000 kg of untreated organic waste everyday.
- gimmick**: A: an ingenious or novel device, scheme or deception; trick. Once dismissed by researchers as a mere gimmick, mnemonics (memory enhancing techniques) are now considered an effective means of boosting memory.
- insurgent**: D: rebel. Beginning in the 1950s, China provided guns, money and moral support to communist insurgents in Burma, Malaysia, Indonesia and Thailand.
- lobby**: A: to (try to) influence the members of a law-making body.

As one ceasefire after another fails, Lebanon's Christian President Amin Gemayel is actively lobbying for Syrian military intervention.

- mayhem**: D: any situation of violence, noise, confusion, etc., havoc; needless or wilful damage. Mayhem in the stands is an escalating problem wherever team sports are played.
- obliterate**: A: to destroy utterly, leaving no trace; blot out. The Bomb obliterated Hiroshima at 8.16 a.m. on Aug 6, 1945, and from that moment nothing has been the same.
- pendant**: B: a strong liking or inclination for something or someone. Whether the subject is the beefiest burger or the biggest corporation, Americans have a penchant for making lists of the best and the worst, then arguing about the results.
- pliant**: D: easily bent, shaped or twisted; flexible or supple. Human blood vessels are pliant yet resilient, range in size from the diameter of a large coin to mere millimeters and traverse a complicated path throughout the body.
- putrid**: B: ill-smelling; decomposed; rotten. In the ancient city of Varanasi, formal ablutions take place only a few yards from the putrid cremation pyres, which often deliver half-burned bodies into the water.
- rugged**: B: rocky; rough; uneven. The rugged mountain ranges in northeast Luzon are traditional strongholds for insurgents of the New People's Army.
- tenet**: B: principle; belief; doctrine. Throughout Western Europe a social and economic revolution is in the making—governments are selling off state-owned industries and challenging a cherished tenet of the modern welfare state.
- tenure**: C: period of holding (political) office, land, etc. During the first two years of his White House tenure, Ronald Reagan rarely immersed himself in the arcane details of nuclear issues.
- tranquil**: B: peaceful; calm; quiet; serene; free from commotion or tumult. In the wake of the violence unleashed in the last two years, the tranquil and pastoral image of Punjab as the land which ushered in the Green Revolution has been rapidly eroded.

Vocabulary Ratings:

20-18 correct	exceptional
17-15 correct	excellent
14-12 correct	good

THE INDIAN RENAISSANCE ITS VISIONARIES

ANITA NARAYAN

If there is any period in Indian history that can be said to have shaped the thoughts, ideas and aspirations of modern India, it is the 19th and early 20th centuries. For it was during this period that India's destiny was imperceptibly yet irrevocably changed under the inspiring leadership of several great lives. Due to their dedicated efforts and thought-provoking philosophies, from a culture that was steeped in medieval backwardness and insularity, emerged a wholly progressive and dynamic culture. A culture that Indians could feel proud of.

Who were these great lives? What significant contributions did each one of them make? These are questions which anyone appearing in the Civil Services (Main) must be able to answer. To help you do that, we are introducing a new series on these 'reformers'.

RAJA RAMMOHUN ROY (1772-1833)

Widely considered the first great social reformer of modern India and pioneer of the Indian renaissance, he was also a learned scholar, well-versed in several languages including Sanskrit, Arabic, Persian, English, Latin and Greek. In his thinking, he was guided by the spirit of rationalism and inspired by the intellectual traditions of both East and West. After making a thorough study of the major world religions, Rammohun, in his renowned work *Gift To Monotheists*, put forth views supporting the belief in a single God. In a later published work entitled the *Precepts Of Jesus*, he focussed on the philosophical aspects of the New Testament and believed that Christ's virtuous message should be included in Hinduism.

To propagate his views, Rammohun along with his followers started the Atmiya Sabha and vigorously campaigned against the evils prevalent in Hindu society. Later in 1829 he founded the Brahma Sabha, later called the Brahmo Samaj whose essence rested in the non-sectarian worship of one God and was based upon the principles of rationalism and the teachings of the Vedas and the Upanishads. The major aims of the Brahmo Samaj was the abolition of idol-worship, caste rigidity, polygamy and social evils such as the practice of *sati*. He openly criticised the priestly class for exploiting the people and for encouraging the practice of meaningless religious rituals. His valiant efforts proved successful when, with Governor-General Bentinck's support, he was instrumental in banning the rite of *sati*.

Rammohun Roy was also a pioneer in the field of Indian journalism and began the printing of the first Indian newspaper and also published several journals to give expression to the views of the public. He greatly believed in the benefits of modern education and opened an English school in Calcutta at his own expense and also found-

ded a Vedanta college. He also provided invaluable assistance to David Hare, an English watchmaker who founded the prestigious Hindu College.

Rammohun was a great defender of women's rights and strongly objected to their subjugation. He believed that by granting them equal status and the rights of inheritance of property their plight could be improved considerably. He was equally vigilant about political issues and strongly condemned the oppressive practices of the zamindars of Bengal. He demanded that the maximum rents paid by the peasants should be fixed so as to prevent their exploitation. He protested against the East India Company's trading rights and the systematic obliteration of local industries by the imposition of heavy export duties on Indian goods. He firmly believed in the equality of all men and supported liberation movements all over the world.

For his bold and courageous views, Rammohun had to pay dearly all his life. He was frequently ostracised and denounced, yet he always remained steadfast about his principles. Many of his views were much ahead of his time and so their significance could not always be fully appreciated then. Rammohun always remained a true patriot. Though he believed that India had a lot to learn from the West, he in no way advocated a blind following of Western values but encouraged assimilation of only those elements which would make India a dynamic and progressive nation. He took great pride in Hindu religion and philosophy and defended it from any kind of misinterpretation. His reforms were aimed at removing the rot and stagnation from society and paved the way for the building of a modern India.

SWAMI DAYANAND (1824-1883)

At a time when Hinduism was steeped in decadent practices and the exploitation of the people by the priestly class assumed enormous propor-

tions, Swami Dayanand Saraswati, the founder of the Arya Samaj, attempted by his teachings to free our society from the shackles of hypocrisy and stagnation and lead it to the more enlightened path of reason and progress.

Dayanand looked to the Vedas for guidance because he considered them to be the source of all wisdom and believed that society should be structured on the basis of their teachings. He discarded the Puranic scriptures and held them to be false teachings designed to fulfill the selfish interests of priests and preachers. Despite his complete faith in the Vedas, Dayanand relied heavily on the principle of reason, and considered it to be the ultimate determining factor for the individual. He presented his views in his famous book *Satyarth Prakash*.

Dayanand was against polytheism and believed in the worship of a single God. He condemned idol worship, child marriage and existing caste prejudices, and greatly favoured widow remarriage and the spread of education among women. He was an ardent nationalist and wanted to build a strong and united India. It was with this view in mind that he started the Suddhi movement which converted non-Hindus to Hinduism. Unfortunately, it later acquired communalistic undertones and contributed in many ways to the growth of communalism in India.

To reach a wider audience, Dayanand gave his discourses in Hindi and acquired a large following especially in the states of Punjab and the United Provinces. The Arya Samaj which he founded in 1875 worked vigorously for the upliftment of women's status and sought to promote equality among all individuals. In many ways it was similar to the Brahmo Samaj and the Prarthana Samaj, yet unlike the Brahmo Samaj, whose reach was basically limited to the intellectual elite, the Arya Samaj acquired a mass appeal.

After Swami Dayanand's death, his work was carried on by his followers such as Swami Shradhananda, Lala Lajpat Rai, Pandit Guru Dutt and Lala Hansraj. Lala Hansraj made tremendous contributions in the field of education and organised the opening of many schools and colleges to impart English education to students. Swami Shradhananda began the Gurukul near Haridwar to revive the traditional virtues of education.

The significance of Swami Dayanand's work lies in the fact that he popularised the message of social reform and managed to reach out to all sections of society. His teachings were held in very high esteem in north India and by virtue of this mass appeal, he and his followers were able to make substantial progress in social and educational reform.

(To be continued)

ESSAYS

FOR CIVIL SERVICES (MAINS)

DEFENCE AGAINST DEHUMANISATION

The world is fast moving towards a technological revolution, with the invaluable assistance of international agencies like the United Nations Educational, Scientific and Cultural Organisation (UNESCO) which is busy promoting the new educational-cum-scientific cult in developing countries. PM Rajiv Gandhi, in his address before the UNESCO on Jun 7, 1985, while underlining its significant contribution to mankind, reiterated India's full support to UNESCO. Excerpts from his speech :

The purpose of UNESCO, in the words of Dr Radhakrishnan, is to foster liberality, understanding and freedom, the truth of the spirit. UNESCO deals with Education, Science and Culture. It is possible for a person to have gone to school and yet be uncultured; it is also possible to be uneducated in the formal sense, yet cultured, as millions of people who are bred on orally-transmitted wisdom are. One may be so exclusively immersed in a highly specialised discipline as to be impervious to larger impulses. A few years ago we used to hear a great deal about the two cultures and their mutual exclusiveness. The very debate led to the introduction of Humanities and Social Sciences in Science courses. The rigid categorisations of yesterday are giving way to broader-based scientific disciplines.

We are becoming increasingly aware of the interrelationship of various branches of knowledge and of various phenomena. Sages with insight have always known and proclaimed the wholeness of life and of knowledge. But lesser people, as in the story of the blind men and the elephant, claim that only their own perception is valid. Science has begun to obliterate the dividing line between matter and energy, between mind and matter, between the living and the non-living.

Education has a key note to play in understanding the world, in coping with life, in adding savour to existence. There is practically no country in the world which is satisfied with its educational system. For centuries education was the preserve of the few. But all societies now are casting aside old hierarchies, castes and vested interests. Education has come to be regar-

ded as a basic human right.

True education, Ruskin said, is training which makes people happiest in themselves and also most serviceable to others. One of the basic functions of education is evidently to make a person productive. But it is more important to enlarge his total personality. Excessive emphasis on the utilitarian has led to materialism that bedevils modern life. In fact it is not even very practical. The acquisition of today's vocational skills, will not suffice when technologies are changing fast. The silicon chip has already joined the wheel, steam-power and the internal combustion engine as a major turning point in the development of technology. The technological revolution which is upon us, is changing types of occupations, patterns of employment, levels of productivity and techniques of training. What serves is not just a skill but the skill to imbibe new skills, a mind that can cope with new situations and challenges, a temperament that is confident, cooperative and creative.

Education has made impressive quantitative progress in India. We have about 120m children at school. Our universities have grown. But a large number of our youth do not know what to do with themselves. They are ill-equipped to deal with today's problems, not to speak of tomorrow's challenges. We have taken up the task of educational restructuring. New advances in communication and transfer of knowledge provide us an opportunity to overcome some of the limitations of conventional ideas that will help people overcome social and economic handicaps and also give them access to the best by way of quality and authenticity.

That does not mean we are neglecting institutionalised education. We are emphasising the schooling of girls. We are working on strategies to reduce the rate of drop-outs. We are redesigning the linkages between the world of learning and the world of work. We are establishing Open Universities and centres of excellence.

All this is a gigantic task. It needs vast resources. Even more, it needs the best available intellectual talent and dedication. Non-formal education calls for considerably greater imagination and the innovative use of information technology.

It is not enough if we set out to do what has been done in the more affluent countries. The answer to the educational problems of developing countries is not

imitation. Conventional indices do not tell the full story. Total literacy need not lead to great wisdom or less of violence and venality. The educational challenges of the so called advanced are no less daunting than those in supposedly backward countries. Both must join hands in the endeavour of moulding better minds and better hearts.

Civilisations such as India's which stretch back into antiquity, have a special responsibility to ensure that they modernise themselves without losing the inner core of their spirituality and traditions. Tradition, said Indira Gandhi, who represented India on UNESCO's Executive Board for several years, is not just the past. It is that part of the past which lives on in the present, and enables the people to face the challenges of the future.

UNESCO has done notable work in helping to preserve some of such priceless treasures of the human heritage as Abu Simbel, Mohenjo-Daro, the Acropolis, Bamiya and Borobudur. India is seeking the organisation's support in preserving our monuments at Ajanta, Ellora, Mahabalipuram, Konarak, and that marvel in marble, the Taj Mahal at Agra. Besides ensuring that archaeological monuments withstand the ravages of the elements, societies must also be helped to conserve their songs and stories. Inculcation of an instinct of conservation is the best antidote to the exploitative tendency.

In Science, the emphasis has been too much on utility and not so much on the joy of discovering the laws that govern natural phenomena, on casting aside prejudice, on being ready to give up what is not tenable. Science has been so submissive to the purpose of the state that the globe is today burdened with a destructive power which can extinguish all life and reduce us to a planet of grey ash and silence. Martin Luther King bemoaned that we have guided missiles and misguided men. Working for peace is one of the functions assigned to UNESCO by its very charter.

The peoples of the world must know more about one another. Modern communications, it is said, have made the world a global village. We in India are indeed using satellite technology to take the world to everyone's doorstep. But people are very often at the mercy of the media. More information must lead to greater strength for the individual, and not greater manipulation of his mind by image-builders and propagators of prejudice. Excessive power over the means of communication on the part of a handful of countries is not conducive to real freedom as it affects the right to inform and the right to be informed of people in the less developed countries. UNESCO's constitution asks it to promote communication in

order to foster understanding. In doing so, it is not our desire to put information in any straitjacket to suborn the institutions of others. We support UNESCO's New World Information and Communication Order in order to ensure the participation of all peoples in life-enhancing knowledge.

UNESCO has problems. We know that almost all international organisations are under pressure today because strong nations have tried to bend them to their purposes. There is an unfortunate retreat from multilateralism and internationalism. All who care for a saner and more equitable world order must come to the help of UNESCO in its hour of trial. India will support any constructive effort which will resolve UNESCO's dilemmas. There is no human institution which cannot work better than it is doing. But to turn away from UNESCO is to turn away from universal cooperation and to reject the democracy of international relations in world bodies.

Human history is a story of bondage and freedom, of strife and harmony, of rivalry and cooperation, of aggression and accommodation. As the great Indian saint, Guru Nanak, proclaimed, "Man is born to be free." History is basically the record of man's fulfilment. It is only through acceptance of co-existence through a willingness to preserve the wonderful diversity of the earth, through seeking the new and fusing it with the old, that civilisation built with the bricks of education, science and culture, can be preserved and enriched.

"I shall tell you a great secret, my friend," wrote Albert Camus. "Do not wait for the Last Judgment. It takes place everyday." It is inner strength and repose that help us to survive that judgment. UNESCO must build not only defences against war in the minds of men and women, but defences against dehumanisation.

SOCIETY AND POLITICS IN INDIA

No political institution can be studied exclusively through legal-institutional and historical approaches. Marxian emphasis on the importance of economic factors and the sociologist's concern for the relevance of social variables are, of course, valid but cannot reveal the ultimate truth. In fact, the relationship between politics and socio-economic factors is one of reciprocal interaction. A political system, in fact, is a part of the larger socio-economic system. Thereby politics of a developing country like India, despite institutional similarities, an economy of scarcity and a social system maintaining loyalties to caste, region, language, religion, etc., differs from that of a developed country like England which has an economy of abundance and an

atmosphere of freedom from feudal bonds. There is thus 'incoherence' between polity and society in the new states in the Third World because "under alien rule, society and polity did not grow together in the same way."

The situation has not changed even today. The paradoxical situation of a modern polity operating in a predominantly traditional society still exists. The final outcome may result in a convergence between polity and society but during the transition, Indian politics will continue to be marked by strains and non-political factors. Rajni Kothari has rightly observed that modern political institutions—Parliaments, parties and opposition movements are "simply a super structure over wholly alien culture or is the communication between them showing signs of fusion and interaction".

Tradition and modernity

The Indian political process bears the imprint of both traditional and modern influences. Moris Johns explains the interaction of tradition and modernity in India through three idioms or styles through which the political life in India is conducted. These idioms are: 'modern', 'traditional', and 'saintly'. The modernity of Indian politics is found in the language of the Indian Constitution and the courts, in parliamentary debates, in higher administration, in the upper level of the main political parties, in the English Press and the like.

A great part in Indian politics is conducted in the traditional style. It exists in rural India, where the consideration of caste, tribe, religion, language and region play an important role. The 'saintly' idiom is found 'at the margin' of Indian politics. It is a kind of moral and spiritual standard of judgment and it provides but little of the dynamics of political activity. It is the language of rare individuals like Mahatma Gandhi, Jai Prakash Narayan and Vinoba Bhave who placed principles above self interest or party benefit and to whom moral values meant more than power or influence. This is, of course, not the idiom of today's politician.

Caste in Indian politics

Although caste seems to be declining in importance as a social factor, it is increasing its importance as a political factor because the establishment of a democratic polity has drawn caste beyond the sphere of social relations into the arena of competitive politics. This process started in the beginning of the 20th century during the British rule, but it received a vigorous boost with the introduction of adult franchise under the Constitution of free India. Consequently, caste has become an important factor in the democratic front. This is probably the single factor which has received an elaborate investigation by foreign and Indian scholars. The influence of caste is

felt in varying degrees in all areas and in various levels of government. It is, however, in electoral politics that the impact of caste is effectively demonstrated. All political parties select their candidates with an eye on caste consideration of the constituencies.

Caste has become a major factor in Indian politics because it provides an extensive basis for mobilising support in the elections. Caste clusters in rural India are attractive to politicians who find it immensely rewarding to woo them to get support. But the impact of caste is not uniform at all levels of politics in India. Its impact is maximum at the local level. Thus panchayat raj institutions reflect almost exclusive caste politics. At higher levels of politics, the influence of caste declines because constituencies become larger in area and thus comprise many castes in their social composition. Moreover in bigger constituencies non-personal and secular issues overshadow personal and sectional interests. Caste considerations get diluted at the national level but their impact at that level is marginal rather than decisive.

Moreover, the influence of caste is not universal throughout India. It varies from region to region. Bihar, for example, is known as the most caste-ridden state in politics followed by UP. The mobilisation of lower castes known as Harijans, into politics and the more recent but fast growing assertiveness of land owning middle-castes like Jats, Yadavs, Kunbis and Gujars are manifestations of the politicisation of caste in India. The Harijans have been an exploited lot for centuries but they have become conscious now. The middle castes are the recent beneficiaries of the land reforms and of the Green Revolution. Thus there is confrontation in rural areas of two camps competing for limited resources. The result: violence and atrocities on the weaker sections of society.

Communalism and secular polity

"Religion, like caste, is a social factor which has a profound influence on Indian politics". It distorts the democratic process as it helps in the continuation of semi-feudal relations in the social structure of India. India is a multi-religious state. It is a secular state wherein Hindus constitute a predominant majority and the Muslim population constitutes the second largest number of followers of Islam in the world. It has other religious followers as well like Sikhs, Christians, Parsis, Buddhists and Jains. It is interesting to note that sometimes in rural areas, Hindus, who are in a majority articulate their interests in terms of caste and the minority through their religion.

Communalism is considered to be the malady of Indian politics. It has two dimensions. On the one hand, it means a

narrow and fanatical attitude which leads to hostility among the members of different communities. On the other hand, it involves exploitation of religion for achieving ends which are not religious but essentially political and economic. In other words, communalism uses religion as an instrument of power politics. Communal tensions have a long history in India. The British made use of these tensions by adopting a policy of 'divide and rule' during their regime.

Evidently, communalism is contrary to secular polity. It can be checked by adopting two methods. First, the administrative measures may be strengthened so as to provide quick and reliable means of controlling communal riots as and when they occur. The political system should inspire confidence among the minority without giving them an opportunity to abuse the system for sectarian ends by raising slogans of alleged discrimination or by organised violence. Special anti-riot police force can be of specific help. Secondly, there is a need to cultivate attitudes and orientations consistent with the ethos of a secular polity. There should be an honest acceptance of a separate cultural identity. Each community must realise that all have the right to coexist and live in this country and must give up all claims of superiority over one another.

R. C. THAPER

WHY A 'LEAP' SECOND?

Once every six months or so, the world's standard clocks are stopped for a second to bring them in tune with clocks based on astronomical events such as the movement of the sun in the sky due to the earth's daily rotation around its axis. This is necessary because, otherwise, the time shown by the extremely accurate atomic clocks would drift away from the astronomical time.

Time is often defined as a quantity that can be measured by a clock. But such a definition is ambiguous because it does not specify the type of clock used. Basically there are two ways in which time can be measured. It can be based on the flow of something like sand or water, or it can be based on a repetitive event such as the daily cycle of day and night, oscillations of a pendulum or vibrations of a crystal. The first method, though used widely before the invention of pendulum clocks, is not really suitable for a practical clock. It is the second method which finds use in today's time measuring devices.

The pendulum was the first oscillating system used for making really accurate clocks. The swing of a pendulum makes for an excellent time measuring device. The motion is exactly periodic, adjustable, and can be used to drive a pointer about a

dial to show time. Its only disadvantage is its bulk. It cannot be carried around. The oscillating balance-wheel driven by a spring works just like a pendulum but is more compact and rugged. It is ideal for portable clocks and watches. But, both pendulum and balance-wheel controlled time measuring devices have limitations. They are highly dependent on temperature. An oscillating quartz crystal is therefore more practical. Quartz crystal exhibits a unique property known as piezoelectricity—a rapidly vibrating crystal of quartz sets up an oscillating electric voltage which can be used to show time through a digital or analogue readout. The crystal can be set into rapid vibrations by an accurately controlled oscillating voltage supplied through an electronic circuit from a battery.

Quartz clocks are highly accurate, but not accurate enough for scientific research and space navigation where even a millionth of a second counts. Accuracy of such high order can be provided by an atomic clock which uses the natural vibrations of the caesium atom. Here one can reach an accuracy of the order of about one second in 10,000 years. Today the caesium atomic clock is regarded as the most accurate and is the standard by which intervals of time are defined. According to this standard, the second is equal to exactly 9,192,631,770 vibrations of an atom of the element caesium, which can be measured with the help of a spectroscope. Accordingly, on the basis of this standard second, the day and the year are defined.

Surprisingly, however, the high degree of accuracy of the atomic clock has proved to be a problem, in a way. It is too accurate for our day to day use. Such a paradox arises because our daily life is guided by what is commonly known as universal or astronomical time which is obtained from the earth's rotation. After atomic clocks came into being, scientists found to their amazement that the speed of earth's daily rotation was not constant. It varied in an irregular manner due to a variety of causes such as tides in the oceans, and seasonal shifts of large air masses and ice and snow deposits over the surface of the earth. Over a period of time these irregularities in the earth's daily motion add up and cause astronomical time to deviate and generally fall behind the far more accurate atomic timer. It is to correct this discrepancy that an extra second, or a 'leap' second, is inserted in a day, once or twice a year. The extra second is added by stopping the standard atomic clocks throughout the world for just one second at midnight on either Jun 30 or Dec 31, or sometimes on both days of the year.

BIMAN BASU

POTSDAM: MEMORIAL OF PEACE

Aug 2, 1945: The most momentous agreement of human history was signed in Potsdam, by the representatives of the victorious allied powers. The Nazis had been defeated and now Stalin from Russia, Attlee from Britain and Truman from the US, came together in an epochal agreement to ensure that "Germany will never again threaten the peace of the world".

Other important tenets of the agreement were the disarmament and demilitarisation of Germany, eradication of fascism and all fascist organisations, punishment of those guilty of the war and transformation of the whole life on a democratic basis. It was also laid down that the Oder-Neissi line should be the German-Polish border.

Every year lakhs of people visit Cecilienhof, the memorial of the Potsdam agreement, to renew their faith in peace and democratic values that was sparked off here 40 years ago. When animal savagery threatened to overwhelm man, humanity had asserted itself; and in the face of brutal, inhuman violence, the benevolence of humans had spoken most loudly. Shocking pictures in the memorial relate the nameless crimes of the Nazis. The images in the memorial bring to light the inhuman cruelty of concentration camps, and Hitler's plans of conquest, even as the visitor is informed of the stipulations of Potsdam and of how its implementation had rooted out fascism from Germany—the place of its birth.

Cecilienhof has become the symbol of the ultimate triumph of sanity over insane violence. The documents of anti-Hitler coalition are a living reminder of reason which has lessons for today and as the director of the memorial says: "The Potsdam agreement is a convincing example of peaceful coexistence put into practice. One of the tasks of our memorial is to popularise this knowledge".

Courtesy GDR Reports

MUSICAL MISTAKE

Contrary to the accepted version about Aurangzeb being a confirmed music-hater who had ordered the burial of music, it has now become known that the orthodox ruler had, in fact, banished singing from his court but not the performance of musical instruments. Surprisingly, he was an accomplished veena player himself. And thanks to the patronage extended by Aurangzeb's queens and nobles to all forms of music, the largest number of books on classical Indian music in Persian were written during his reign.

Mizoram's Children (Continued from page 30)

The story essentially revolves around Zoramthangi, a fascinating rustic child-woman. Through her experiences the author narrates the hardships life in Mizoram offers in abundance—the rat menace which causes frequent famines, other natural catastrophes—all evidence of nature's power 'that can be at once beautiful and devastating' and the omnipresent terror of the underground. In fact, the book provides a revealing insight into the clandestine operations of the underground, its modus operandi and the dramatic change in individuals who join this dreaded group.

The IAS officer in the author also surfaces at times when he discusses the measures the government and the police force take to counter the underground's lethal blows. With the result that while one of the book's main characters Ajai Kapoor, a police officer is cast in a hero's mould, Lalthanga, a dare-devil killer of the underground emerges as the clichéd villain of the piece. The book presents a biased view of the situation—with a definite tilt towards the administration.

As far as the depiction of rustic life in Mizoram goes, Bhatnagar has managed to do justice to it. The joy of living is still present among the Mizos even though constantly shrouded by terror and death. Zoramthangi's zest for life cushions the tragic blows of destiny and after each blow she emerges more mature, more capable of handling calamities. And perhaps, what the author wants to convey through his book is summed up in the extract from the prologue:

The moment you enter the school building, a huge board attracts your attention. On it are printed the following words: 'Go placidly amid the noise and remember what peace there may be in silence. As far as possible without surrender be on good terms with all persons. Speak your truth quietly and clearly; and listen to others, even the dull and the ignorant. They too have their story. If you compare yourself with others, you may become vain and bitter, for always there will be greater and lesser persons than yourself. Enjoy your achievements as your plans. Keep interested in your own career, however humble; it is a real possession in the changing fortunes of time. Exercise caution in your business affairs; for the world is full of trickery. But let this not blind you to what virtue there is; many persons strive for high ideals and everywhere life is full of heroism. Be yourself, especially do not feign affection. Neither be cynical about love; for, in the face of all aridity and disenchantment, it is perennial as the grass.'

J.S.

A CLARIFICATION

A few readers have written to us that answers to questions in the test paper of Civil Services Exam, 1984 published in April '85, do not tally with the answers carried by another magazine. All such letters were given to our author who explains as follows:

4. Our alternatives do not give APPLE and, therefore, INSAT 1-B is correct.
5. The dates of different events are
1945 - First nuclear explosion
1954 - Hydrogen Bomb
1957 - Launching of first satellite
1969 - Man lands on the moon
6. Cornage metal.
9. Rupee trade is correct as there is no barter system with the rest European countries. Only with Yugoslavia trade is on normal foreign exchange basis.
13. (b) is correct.
14. Sugarcane takes 10-12 months to mature.
15. Double deal is correct.
22. More water and more fertilisers is correct. You cannot use fertilisers without assured water supply.
35. Any impure milk can cause Typhoid. Cow's milk can lead to Tuberculosis if the cow is suffering from the disease.
37. Stagnation and inflation is correct.
38. The life span of different animals is as follows:

Elephant	-	100 years
Horse	-	20-30 years
Tiger	-	20 years
Wolf	-	10-15 years

39. Mirage-2000 is correct as no deal has been finalised for MiG-29.
42. The question given in CC Times, and in the other magazine do not match.
47. Bhakti cult is correct.
49. Shah Jahan is correct.
52. Chromosomes of the father is correct.
53. The President is correct as the UPSC only selects the persons and does not appoint them.
54. The maximum saving is done by the household sector. Banking sector does not save, it only mobilises.
55. Mixed farming includes rearing of pig, dairy farming, etc. as also farming.
60. Finance Commission is correct.
65. Price rise goes in favour of businessmen.
76. (a) is correct.
79. The dates for three different events
(a) 1526
(b) 1192
(c) 1600
96. (a) is correct.
101. (a) is correct.
102. (a) is correct.
116. William Jones founded the Asiatic Society on Jan 15, 1784. (Source: *Encyclopaedia Asiatic* p. 184 Edition 1976).
121. (a) is correct.
124. (c) is correct.
127. (c) is correct as 1980 was a leap year.
130. (d) is correct.
131. (b) is correct.
132. (a) is correct.
141. (b) is correct. (Source: *Sixth Plan Document, Planning Commission*).

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Coffee Break

NOTES FROM ALL OVER

America Sobers Down



We are what we eat. But if we accept the latest American indications, we're also what we drink. At least, that's what they believe.

All over America, wine, mineral water and fruit juices are replacing distilled spirits. Trends indicate that the martini, in so many ways a symbol of the American lifestyle, is on its way out. In bars and restaurant lounges, in hotels and at home, the demand is for cool: clear water, iced tea and exotic fruit and wine concoctions. Most Americans are tapering off their drinking habits at a faster pace than at any time since the Prohibition (1920-1933). They're drinking less, they're drinking lighter and they're proud of it.

The trend is a reversal of America's long standing love affair with the bottle. American hospitality was drinking together. Indeed, some said, "The family that sways together, stays together." The movies portrayed most Americans as hard drinkers, whether journalists, truck drivers, actors, businessmen or family men. Alcohol, the social lubricant par excellence, smoothened a business deal, lent a romantic haze to wooing ("winning and dining"), alcohol made one happy and benign, a few drinks livened up a dull evening and loosened tongues.

The new trend away from hard drinking is not a moral crusade. It reflects the changing social landscape in America. People tend to drink differently as they grow older. The 'cool' sixties generation has grown up and mellowed under the burdens of family and career respon-

sibilities. The work ethic of the contemporary young urban professionals ("yuppies") does not allow them much time for drinking. There is little sympathy for those with hangovers and to be seen drunk in public is strictly no-no.

The increasing abstinence is also a reflection of the average American's obsession with physical fitness. "There is no such thing as a fat yuppie," observes the owner of a fashionable restaurant. Alcohol has joined the ranks of sodium and cholesterol, as food items to be strictly avoided by the health-conscious. The 'demon rum' apparently holds more terror for some people than even cocaine.

In their mania for fitness, the Americans jogged, swam and exercised. They ate fresh fruits and salads, wheatgerm and 'nature' foods. And now they're going teetotal. Perhaps it makes them feel pure and clean.

The trend towards temperance is evident in the way increasing numbers of Americans are working, playing and socialising. Their attitude towards their career, health and self-image is bound up in their tipping habits. Even television is attempting to reverse the approach which lent an aura of glamour to drinking by portraying it as "macho, cute and acceptable". Fewer people will now appear on the idiot-box nursing a drink.

Americans are now ordering their bottled water by name as they once did their Scotch. Connoisseurs select their brand carefully on the basis of flavour and fizz. The Italian San Pellegrino has a clear spring-water flavour, the German Apollinaris tastes of minerals, while Perrier of France is neutral when cold.

The consumption of distilled spirits fell from 2.88 gallons per adult in 1974 to 2.46 gallons in 1984, while the sales of bottled water soared. The changing tastes of drinkers, cutting down on quantity and going for quality is no more evident than in the wine industry.

The \$66.4b alcohol industry is facing trouble coping with the new fashion. It took the industry a little time to develop a softer and lighter line of alcoholic beverages to meet the market demand. St Regis, the first mass-marketed non-alcoholic vintage, introduced last year, is already selling briskly. Some 40 brands of wine coolers, carbonated mixtures of fruit juice and gin have captured 5 to 8% of the wine business since they hit the market three years ago.

A store owner in San Francisco estimated that his sales of hard liquor had come down from 70% to 10% in the last five years. Wine and beer account for about 65% and the rest is taken up by bottled water. The results of a recent poll seemed to confirm this trend. About 67% of 170m adults admitted to drinking. However, more than one-third had reduced their consumption while only 6% said they drank more.

Indeed, abstinence has introduced some new drinking and socialising trends. Parties at which people drink less, or not at all, are longer and actually afford opportunities for proper conversations. Bars and saloons are emptying out early—around 1 a.m. Deals are now struck over iced tea and sandwiches, and not martinis or bourbon.

The new sobriety pattern is being helped along by firms penalising employees who drink on the job and by tough anti-drinking laws to combat highway automobile accidents.

Could this neo-temperance mood lead to a new prohibition era? No, not until moderation is exercised and each person is left to do his or her own thing.

Malini Sood, New Delhi

Reincarnation Of Nero



The young Emperor Nero's name has been synonymous with blame and ruthless deeds. The sadistic Roman Emperor had become anathema to the Roman populace by ordering his mother's execution, persecuting Christians and Jews and committing innumerable savage deeds without compunction.

Roman literature, known well to its victims, has fully avenged its wrongs by

NOTES FROM ALL OVER

painting Nero as a monster of wickedness. In Christian tradition he even appears as the mystic anti-Christ. In the Middle Ages Nero was the symbol of splendid inequity.

Nero's behaviour has come under fresh scholarly discussion due to the light thrown on it by recent study of ancient Roman chronicles, sculpture, ruins and coins. Though Nero is still seen as profoundly ruthless, new research has made him seem more understandable by accentuating the fact that his reign was shaped by his enthusiasm for art and baffling political problems. With this discovery the limelight has now shifted from the ruthlessness of Nero's character to the socio-political problems of the age that made him the man he was.

Stepson of Emperor Claudius and born in A.D. 37, Nero became Emperor at 16 and reigned for a tenure of 14 years. Widely loathed and challenged by revolts, he committed suicide in A.D. 68, bringing to an end the line of the Caesars, begun by Emperor Augustus.

Opinions of the various scholars differ with regard to Nero's personality. Miriam T. Griffin, a scholar at Oxford University, defends Nero by opining that Nero suffered "from a lack of intellectual equipment to deal with the strains of the complex political system" of his day. Her book *Nero: The End Of A Dynasty* depicts Nero as a great connoisseur of art. Experts feel the book has shifted its accent from Nero's sadism to the weaknesses inherent in the Roman political system. Glen Bowersock, a

professor at the Institute for Advanced Study, New Jersey, though fiercely anti-Nero, agrees that Nero's reign was "a great time for literature". Miriam, known for her sympathetic stance for Nero, feels that "Nero was a man of taste rather than intellect" and by the time of his death, she feels, he was losing his mental balance.

A long-held view buttressed by ancient writings has been that Nero's reign started well after his mother, Agrippina, crowned him as the Emperor. His prestige and his good traits were carefully fostered by his able advisers. Yet within one year of coming to power Nero caused the death of Claudius' son Britannicus, who had been expected to become Emperor. And Bowersock argues that all sensational events of sadism only underline his naturally ruthless character.

In A.D. 64 Rome was caught in the grip of a huge conflagration and it is alleged to have been deliberately caused by Nero. In fact, it is alleged that he declaimed poetry (not, as the popular saying has it, that he fiddled) while Rome was ablaze. However, Miriam defends Nero by stating that recent findings point to the fact that Nero was fond of some of his quarters damaged by fire and hence the allegation should be dismissed as a rumour.

What is so novel about Miriam's viewpoint is that she has held inherent weaknesses in the political system of the Roman Empire squarely responsible for Nero's downfall. The light that she has shed on Nero's character has been crucial in changing his image from a "monster of the order of Idi Amin" to "a man of taste".

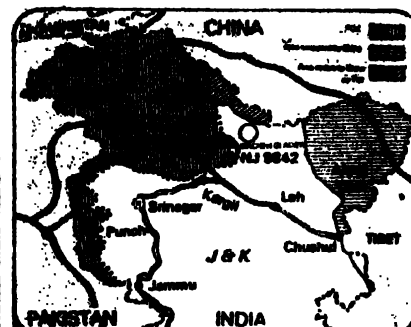
Nesta Lal, New Delhi

in the north and south of republics or sometimes the provinces. Unlike *Derrick* or the *Old Fox*, it is not always the same investigator: several are at work, such as Chief Superintendent Stover (Manfred Krug), who likes to emulate Columbo, or Superintendent Lutz (Werner Schumacher), who has been chasing screen bandits around Stuttgart since 1971, and is handicapped by his assistant's chronic propensity for taking offence.

In the Federal Republic of Germany (FRG) some 20m viewers see every instalment of *Tatort*. But also in other countries, particularly Sweden and the Netherlands, a type like Schimanski (Gotz George) has many fans. He is one of the new *Tatort* investigators: a rough diamond, a hard hitter who can use his elbows. In the *Old Fox* and *Derrick* set-up, Superintendent Schimanski would be more likely to get the role of the villain.

Courtesy Scala

The Third Pole



They call it the 'Roof of the World' or the 'Third Pole'. The temperatures here dip down to minus 50° with howling and freezing gales from Central Asia that make life of any kind well nigh impossible. Only trained mountaineers dare to trek these desolate heights which have now become an improbable battle ground where the Indian Army's long vigil since 1948 was shattered in the summer of 1984 when Pakistani troops attacked Indian posts in these glacial regions.

This is the Siachen glacier—a vast expanse of drifting ice that rises to a height of 19,000 ft at its head known as Indira Col—located north-west of Leh in the high altitudes of Ladakh. It means rose in Ladakh. It can be reached through Leh, the capital of Ladakh, from where a road winds through high mountains and later descends into the Nubra river valley which con-

The Scene Of The Crime



Gentle but cunning: Lowitz as Old Fox.

With cautious cunning, TV Inspector Koster, known as the Old Fox, solves intricate cases, is courteous and urbane, turns up at the homes of victims, witnesses and suspects, and TV viewers sense that the investigation is in the right hands. His opposite number, *Derrick*, is likewise not out for quick results. The tall, easy-going detective puts his questions with great circumspection, although there is occasionally something reproachful in his look.

The Old Fox and *Derrick* are among the gentlest—and most popular—heroes of the West German TV network ZDF. Every episode brings 15-20m people to the screen to see Koster and *Derrick* on the trail of the murderers. Even abroad, the crime busters from Mainz are

very popular. The Old Fox's investigations are screened nearly everywhere: all over Europe, in 25 African and 12 Latin American countries, two in the Caribbean and seven in the Middle and Far East (including India). *Derrick*, who has been in search of offenders and their motives for the last 10 years, is also a screen globe-trotter. The countries where he is known include Japan, Australia, Iceland, South Korea, Poland and Czechoslovakia. He is particularly appreciated in Italy, where in 1983 52 instalments were televised on consecutive evenings. Heinz Ugureit, head of the ZDF department for TV plays and films, once observed *Derrick* on Italian television: "He spoke like an Italian, and behaved like an Italian. All at once he didn't look like a German superintendent any more."

What seems to be appreciated about *Derrick* and the *Old Fox* is the gentle touch. They are classified as 'soft crime' series, dispense largely with scenes of violence, take place mostly in respectable circles, and set out to elucidate psychological backgrounds.

Very different from these is *Tatort* (literally: the scene of the crime). The series is generally more violent, has feature film length and goes in for action, which tends to take the form of cars regularly being smashed up. Statisticians have ascertained that per 100 *Tatort* screenings, 40 cars end up in the scrapheap. The scene for *Tatort* stories is set in regularly varying, but constantly recurring, locations—for instance, the Ruhr areas, cities

NOTES FROM ALL OVER

ries the melted water of the Siachen glacier.

The glacier is approximately 76 km long from its snout to the head and is considered to be the longest in the world. It meets the Saltoro glacier at the 24,350 ft high Indian peak of Sia-Kangri which was climbed by Col Narendra Kumar in the summer of 1981. From the summit of Sia-Kangri, Col Kumar had gazed into Tibet, China, Pak-occupied Kashmir (POK), Afghanistan and Soviet Turkistan. Saltoro is described as the second largest glacier in the world and together with Siachen, is known as the 'Third Pole'—being the largest glaciers outside the Polar region.

The borders of the erstwhile state of J&K with Pakistan alone are recognised by the Indian Government. The tribal invasion from the Pakistan border in 1948 and the Indo-Pak war of 1971, when Pakistani troops were further pushed into the territory of POK, left these inhospitable glaciers untouched. Both the Karachi Agreement of 1949 and the Simla Agreement of 1972 terminated the ceasefire line and line of control respectively at a point near River Shyok in Ladakh, and thereafter merely specified "thence northwards to Glaciers".

India had been patrolling these glaciers since 1948, but Pakistan, with the help of vested foreign interests, sponsored a few foreign expeditions through this uninhabited area to establish an illegal claim.

This brings us to the oropolitical side of the

issue over Siachen, especially in the context of the use of mountains as a means of control in Siachen began in a rather novel manner: a 1957 Imperial College expedition under Eric Shipton, mountain-explorer and climber extraordinary, was permitted access to it for mountaineering and scientific research. Unlike British probes during the Gilgit Game, Shipton was no agent in disguise. But the fact that the expedition made its way to the Siachen across Bilafond La, and reconnoitred Saltoro Kangri without let or hindrance, tended to convince foreigners that the area was firmly under Pakistani control. The expeditions that followed with "Pakistani permission" reinforced this opinion. These included expeditions by an international (1960), an Austrian (1961), and at least three Japanese (1962, 1975 and 1976) teams. Between themselves they recorded several ascents of peaks in the Siachen area and further afield.

Thereafter, the Saltoro and Siachen ranges which had been patrolled by Indian troops had now to be physically held in order to prevent Pakistani incursions. The Pakistani designs to substantiate their illegal claims became evident

WHAT WAS THAT?

While waiting at Jharsuguda railway station for the Utkal Express, I asked a fellow traveller about the train timings. He replied, "Oh, the Utkal Express? Its *aperture* is at 3.50 p.m. and *departure* at 4 p.m."

Mohsin Ali Khan, Sambalpur

assault on our positions on the 'Roof of the World'. Pakistani troops were especially trained and equipped with modern and sophisticated equipment. Officers and men of the Indian Army fought heroically in these hazardous areas and did not give an inch to these aggressors. They in turn inflicted heavy casualties on the Pak Army. The last of these attacks was launched on May 29 when Pakistani aircraft had overflown the area on a reconnaissance mission. This was accompanied by ground clashes which were defeated.

The glacial regions are now an integral part of Indian territory. In June 1985, a 10-member Indo-British expedition led by Harish Kapadia was sponsored by the Indian Mountaineering Expedition to climb certain peaks in these glacial regions.

Indian troops have defeated the cartographic aggression followed by repeated attacks by Pakistani troops. They are operating at altitudes varying between 18,000 and 22,000 ft. These battles at such formidable altitudes are, perhaps, a record. Logistics pose a severe problem in these areas where the 'chopper boys' of the Indian Air Force along with the pilots of transport aircraft fight high velocity winds and sub-zero temperatures to land and airdrop supplies, evacuate casualties and provide logistic support to the brave jawans. The men of the Indian Army are trained extensively before induction in these altitudes and are also fully acclimatised to combat diseases common in high-altitude regions.

Philately

BANKING ON POSTAGE STAMPS



Afixing a postage stamp (of the required value, of course), on a letter denotes payment of postal fees and is, therefore, a kind of passport to its destination. Traditionally, this has been the function of postage stamps. Over the years, however, they have come to acquire a significance of their own. They commemorate special events in the life of a nation, its celebrities in various spheres, and depict the significant aspects of its culture and economy.

The role of banking in modern life being what it is, it is small wonder that stamps should fea-

ture it. The first stamp on banking was issued by Sweden in 1934 to mark the 50th anniversary of the Swedish Post Office Saving Bank. At least 35 countries have since depicted bankers and banking on their postage stamps. The stamps on banking have motifs which are symbolic of savings namely nut trees, nests, squirrels, bees, ants and passbooks.

Various banking anniversaries have also been honoured with commemorative stamps. The 1950 US commemorative stamp for the 75th anniversary of the formation of the American Bankers Association is the oldest among the American stamps on

banking. In 1967, Australia issued a stamp showing old vault keys and a modern vault lock, to commemorate the completion of 150 years of banking on the continent. Some of the best designs of stamps were those issued by a number of African nations in 1969 to mark the fifth anniversary of the African Development Bank. Rwanda featured reproductions of medieval Flemish paintings depicting bankers and their wives. Kenya, Uganda and Tanzania issued a design showing the Uprobia tree, the emblem of the African Development Bank.

National Banks of many countries have often featured on stamps; mention may be made in particular of Pakistan, Turkey, Syria, Mauritius, Nigeria and Malaysia. Bankers, too, have been honoured on many stamps. Amadeo P. Giannini, founder of the Bank of America, was honoured with a US stamp in 1973. Jacob Fugger the Rich was portrayed on a German commemorative stamp issued in 1959 to mark his 500th birth anniversary. (Fugger financed Kings and Popes of his time in 1915 he established the 'Fuggerei' a philanthropic foundation which is operating to this day.) Belgium issued a stamp in 1966 honouring its celebrated

banker A.N. Janssen.

The latest banking stamps are from Sweden again. To celebrate the centenary of the Swedish postal savings they issued three stamps last year depicting old post office savings symbols. From a modest start postal savings have grown to a comprehensive activity of great importance to millions of people and to the economic life of Sweden. For a long time the postal savings bankbook account was the only type of savings account. But gradually new bank services were introduced. Among them, the Postal Savings Bank made a pioneer effort in collecting savings by automatic paycheck deductions. Over the years, the post office staff of Sweden have worked hard for the postal savings cause. The postal savings movement has had different organisational forms at different periods. Since June 1974, when the Postal Bank and the Credit Bank of Sweden merged into the PK Bank, the PK Bank has administered the movement in close cooperation with the post office.

The stamps on banking issued so far by various postal authorities throughout the world help us in gaining knowledge of world history of banking in an entertaining way.

Tapan Roy, Howrah

MONKEYS OF INDIA



No country has such an ancient and close association with monkeys as India. Over the vast spread of Karnataka, there are innumerable shrines to Hanumanthadevara, the monkey god celebrated in the epic, the Ramayana. These shrines, besides being live centres of worship, serve varied social needs in remote areas. And outside Karnataka, indeed, all over India, monkeys are still tolerated and indulged even in places where they are a problem to people.

We have only one ape, the hooklock gibbon whose habitat is limited to the extreme north-east, but we have many monkeys, and all belong to two large families; they are all either macaques or langurs. That may sound rather technical, but actually the difference between the two is quite apparent.

Macaques are thickset and (except for the bonnet monkey) short-tailed: they have cheek-pouches into which they stuff food, to be chewed up at leisure, and compared to langurs they have well-developed muzzles. They are omnivorous, and though mainly vegetarian, also hunt insects and such other small prey as they can. The rhesus, the familiar *bandar* of north India, is typical of the macaques.

Langurs, on the other hand are tall and gracefully built, and have long muscular tails: they have no cheek-pouches and have flat faces, encircled by whiskers. The long hair of the crown forms a shading peak low over the eyes. They are all vegetarians, so heavily dependent on foliage and leafbuds for their sustenance that they are also called 'leaf monkeys'. The common langur, found all over India, the big, grey, black-faced, long-tailed monkey called Hanuman in the north (more about the aptness of this name later) is quite representative of its tribe.

Though we have a good many monkeys, only three belong solely to us: the bonnet and lion-tailed monkeys (both macaques) and the Nilgiri langur. All three are south Indian, and the last two the only black monkeys of India.

Our best-known monkey, in fact the best-known monkey in the world is the rhesus. Because it is a suitable substitute for mankind in testing the efficacy of therapeutic drugs and assessing the course of diseases, it has been universally used in experimental investigations. The 'Rh' in the term 'Rh-factor' (so important in blood grouping and human genetics) stands for rhesus.

The rhesus is also to be found below the Godavari river in south India, but its main home is the great tract above the river extending right

up to the Himalayas. It is predominantly Indian, but is also found outside, in Burma and southern China. It is common in small parties and troops in most open forests, but it is where people assemble in crowds, as at some shrines, railway stations and bazaars, that it is to be seen in a regular battalion, made up of several troops. In such places it depends for its living on human charity and negligence, scrounging for food and sometimes even resorting to robbery. It is also in such places that it attains its most robust development, human food evidently being more nutritious than what it can get in the forest. The rhesus is equally at home up on the trees (or the spires of shrines) and on the ground and is a strong swimmer, taking freely to water.

In and around the north-eastern state of Assam, extending into countries beyond, there are some macaques that are obvious cousins of the rhesus—the stump-tailed, pig-tailed and Assamese macaques. These are bigger than the rhesus and shorter in the tail, but they also have grey-brown coats and reddish facial skin. South of the Godavari river, right down to the southernmost tip of India at Kanyakumari, the bonnet monkeys replace the rhesus. These two are the only Indian monkeys given to haunting human settlements in large numbers. Though they are of much the same size and both grey-coated and red-faced, the bonnet monkey is unmistakable, its long tail and flat crown of radiating hair, neatly parted in the middle, being so distinctive. It is at some shrines (Tirupati, for instance) that it attains its best size, and in such places gathers in large numbers and begs and steals for its living.



The lion-tailed monkey has a very restricted range, limited to the dark evergreen forest called shola forests in the southern reaches of the Western Ghats. Owing to its limited habitat preference and to its being intensively hunted by poachers, it was seriously in danger of extinction. Strict protection has saved it, though it is still rare. It is a strong monkey, jet black, with a great mane of pale grey hair surrounding its head in a massive halo. Its short tail ends in a slight tuft, which its old dominant males, forms a tassel—the prefix 'lion-maned' would have been far more appropriate to it than 'lion-tailed'. It is gregarious, living in troops, and highly arboreal, and though all

macaques eat some animal food, it is the most assiduous hunter of them all—insects and grubs scraped from under the bark of trees, lizards and tree snakes (including the poisonous green pitviper), are all eagerly hunted. But its main sustenance is provided by wild fruits, buds and leaves.

The common (grey) langur is the only monkey with an all-India range. It may be seen from the foothills of the Himalayas to the southern tip of India. At one time it was even suggested that the fabulous Yeti might, perhaps, be some gigantic variety of this langur that had taken to the high snows. The grey langur lives in troops, and favours open, rocky forests. In places, as at Bhatian in the Sariska Tiger Reserve in Rajasthan, it assembles in troops at shrines, but never pesters people the way macaques do. It is, like others of its tribe, a vegetarian and does not enter water. It is well known for its keen sight and its rasping, compulsive alarm calls at the sight of predators such as tigers or leopards.

All over the north, the grey langur is known as the Hanuman, which seems to be a misnomer. The Puranic figure belongs very much to south India, and everywhere in the south it is the bonnet monkey that is specifically depicted in classical carvings and graphic depictions of the monkey-god.

The Nilgiri langur favours much the same rain forest and sholas as the lion-tailed monkey, and is limited to the Western Ghats in Tamil Nadu and Kerala. However it is by no means limited to the Nilgiri range as its name might suggest. It is also jet black, with the crown and sparse whiskers brownish grey, but even in the gloom of a shola forest is easily distinguishable from the lion-tailed monkey by its much longer tail and its much more energetic and noisy movements in the tree-tops. It is given to bounding along high branches and to prodigious leaps from tree to tree. The common langur, too, indulges in such leaps at times. Like the lion-tail, the Nilgiri langur was also hunted to rarity, but with adequate protection it has renewed much more rapidly, mainly because it is more adaptable and more enterprising in taking to 'fresh fields and pastures new'. Today it is to be found even in mixed deciduous forests, as in the Annamalai and Mandanthurai sanctuaries. It is specially fond of flower buds and leaf buds, and will visit even dry forests in search of such titbits.

Two other langurs that might be mentioned here have an extremely limited distribution in India—only along the north-eastern border of the country. Along the border with Burma and with Bangladesh, there is the capped langur, a dark grey and arboreal, with the stiff long hair on its forehead not forming a shading peak above the eyes but sloping upwards in a crest over the crown. The beautiful golden langur occurs along the Bhutar border, and is related to the capped langur taxonomically, though it looks very like a common langur which has such a luxuriant crown and whiskers that its ears are hidden. It is black-faced and its hands and feet are also black-skinned, but its coat is golden yellow, darkening to red-gold on the flanks—when the sun hits its coat, its opulence is effluently displayed.

M. Krishnan, Madras

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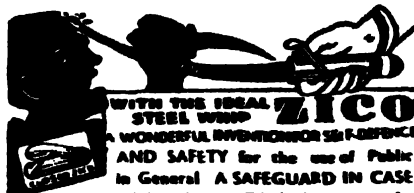
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Word Play-1

BY RANI P. SOMAN

F	E	L	S	A	L	N	W	B	E	H	K
D	A	R	U	E	I	O	L	E	A	T	S
M	E	S	A	N	I	Y	R	R	L	W	G
E	T	S	O	E	T	D	D	R	J	L	N
E	M	R	U	O	P	Y	H	F	A	O	S
D	C	I	N	O	N	S	T	S	I	C	Z
U	K	R	N	I	H	E	E	L	U	D	O
M	N	I	A	G	L	E	A	K	I	R	L
A	Q	W	P	Y	W	M	D	C	A	E	A
S	T	D	O	L	G	A	K	O	N	H	O
H	N	D	X	Y	I	E	Y	R	W	G	S
A	A	J	P	S	N	N	E	H	U	A	G
T	O	W	E	S	E	V	G	H	U	R	T

Keywords has had a long innings on these pages. How about training your mind to play other games? Games that could be equally amusing—and infuriating.

All you have to do here is look for the names of 22 authors (all English and American) *plus* the title of one book by one of them hidden in

the grid. They have been set horizontally, vertically or diagonally, forwards or backwards. No letter has been used more than once. The following clues should make your job easier:

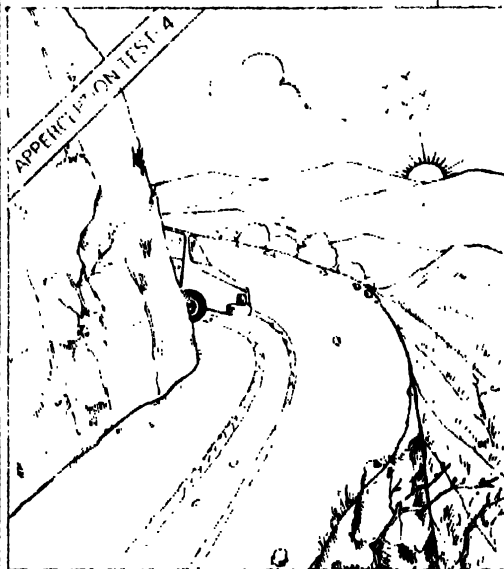
1. Suffers from chronic colds and shakes.
2. He's a meek one.
3. The grass is greener on the other side of the citadel.
4. A 'ton' who hands out fives and sevens.
5. He is the tough one.
6. He believes in quick travel.
7. The way the bell tolls.
8. The butler of the woods.
9. The law of the jungle prevails in his yard.
10. What a shame, he's always in such a hurry.
11. Life's as exciting under the sea as it is around the world.
12. My fair lady.
13. She claims to have advised Atlas under a fountain.
14. Cure for hunchbacks, go dancin' girl!
15. Machines or wells, it is the shape that counts.
16. Just let the car roll!
17. Heard of cannon with looks?
18. Is it or is it not a marked tin?
19. He found his goliath in the copperfield.
20. He believes in triple chivalry.
21. She is the prejudiced one.
22. Whenever she says 'mama' it sounds like 'nana'.

● Though all your entries will be included in the draw of lots, you will be entitled to only one prize—the highest in case you're getting more than one.

Closing date for the contests: September 25.
Address your entries to: The Editor, Career & Competition Times, 10 Daryaganj, New Delhi-110 002.

Solutions in November.

OBSERVE & DESERVE



TRACK IT DOWN

An eye-teaser it certainly is. But if you are smart you will not let VIJAY KONWAR tease you for too long. All you have to do is to tell in what way the car on that tortuous hilly road has not behaved in a manner that is normal and scientific. You have a 20-word limit to explain your observation.

THE RIGHT TOUCH



Word Play
Coupon

SOLUTIONS... SOLUTIONS... SOLUTION

KENWORDS-44

Across: 1. Syllogism 4. Crane 5. Shura 7. Nymphs 9. Nymphs 10. Geiger 13. Rossi 15. War 16. Mafia 17. Narcissus

Down: 1. Space 2. Odessa 3. Mvule 4. Antares 5. Antares 7. Bihar 8. Zeus 11. Kari 12. Lenin 14. Sofia

Winners

1. P. P. (one-error); 1. P. P. Sharma
New Delhi 2. D. Usha, New Delhi.

Keywords-44, it seems, has 'foxed' the entrants.

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APPERCEPTION TEST-2

The butterflies got the better of most of you who participated in this test. So Gopi Gajwani actually succeeded in deceiving you with those reptile insects. But that may be all because they were after all 'Out Of Touch'. Because if they had been 'in touch', you would have noticed that the lady should have had the *pallu* of her sari falling over her left shoulder.

The ten lucky 'deservers' are: 1. Suhas J. Magad, Udupi (Karnataka) 2. S.K. Sundaran, Nagpur (Maharashtra) 3. Mritunjay Bose, Nagpur 4. K.B. Sunil, Jamshedpur 5. K. Rekha, Nagpur 6. Anil Tuls, Jabalpur 7. J.V.L. Jayana, Kakinada 8. Anju, Delhi 9. Lalit Ran Jha, Patna 10. Yatreshwar Singh,

Bhagalpur

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PRIZES

WORD PLAY-1:

2 First Prizes

Sidney Sheldon's *Master Of The Game* and Charles Dickens' *David Copperfield* from **Rupa & Co., New Delhi** to the first two *all-correct* entries (or *one-error* entries if there are no all-corrects) pulled out of the hat.

Plus 5 Consolation Prizes—Jane Austen's *Pride And Prejudice* from **Rupa & Co.**

APPERCEPTION TEST-4:

10 First Prizes

An exciting package from **Rupa & Co., New Delhi** to the *correct* entries pulled out of the hat.

HOW TO ENTER

● Print the answers neatly in capital letters alongwith your name, age and address. Each 'Word Play' and apperception entry must be written *only* on postcards.

● You may send in any number of entries, but each must be numbered accordingly and accompanied by its respective COUPON.

Your Page

RED DREAD

A story about Russia's late Chairman Leonid Brezhnev tells of the time when he took his mother on a tour. First he showed her his luxurious flat in Moscow, then they travelled by a chauffeur-driven car to his 'dacha' near Usovo. Afterwards he arranged for a helicopter to fly them to his hunting lodge.

Throughout the day, the old lady said little and seemed strangely ill at ease. Finally, in the banquet hall of the lodge, Brezhnev turned to her and said, "Tell me mother, what do you think of it all?"

"Well, it's very nice, Leonid," she said after a moment. "But what if the Reds come back?"

Amulya Krishna Pattanaik, Banpur

THE WEIRD BEARDS

Since antiquity man has sported a beard in various shapes, sizes and fashions—during different periods in history. The beard has been a symbol of maturity, wisdom and age. It is also associated with manhood and virility. Today it has even come to be associated with intellectual depth. It is not uncommon for an artist or a poet to groom and sport a stylish beard.

Alexander the Great ordered his army men to shave off their beards. He was just trying to be practical; according to him, a man might be seized by his beard by the opponent in hand-to-hand fighting. However, some historians are of the opinion that the real motive was to emphasise the distinct character of his subjects.



For centuries, men have been shaved, many as young as 14, and in 1857 London citizens were forbidden from sporting long beards. If anyone defied the order, he was denied the freedom to live in the city.

In the 18th century, Czar Peter The Great not only shaved off his own beard but ordered that of those who kept beards be taxed. This was because of modernising Russia. However, Czar, the leader of the Russian revolution wore a quarter-moon beard. Since then the beard has also become a sign of revolutionary fervour in the man who wears it.

The beard has also served as a disguise for the murderers, swindlers, scoundrels, crooks and thieves. Also a patriot like Netaji Subhash Chandra Bose grew a beard to disguise himself as a *pathan* when he escaped to Afghanistan.

The beard has also been a symbol of prestige, so much so that men have suffered untold afflictions, to retain their beards. In 1185 when Prince John of England ordered that the beards of Irish chieftains be plucked, many chieftains resisted and even died fighting for the cause of their beards.

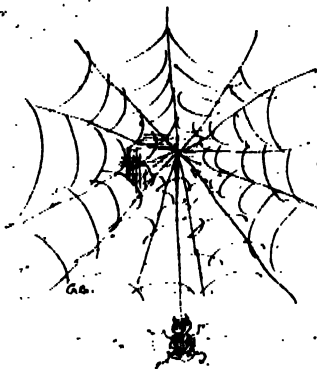
Sir Walter Scott's grandfather swore that he would not shave off his beard until the Stuarts were restored to the throne of England. All his property was confiscated but he preferred to retain his beard.

Viva la beard

Michael R. Patrao, Mangalore

HANGING BY A THREAD

If you were a spider you would. All spiders produce silk, whether they make webs or not. The spider's elaborate web is made from sticky silk, which is what traps the insects. The silk is also used to wrap up its eggs, and acts as a life-line for a spider that falls from its



home. Young spiders also use silk threads as gliders. They let a strand of silk blow in the breeze until it whisks them up into the air. Drifting spiders have been caught thousands of feet up in the air.

The silk that is used for so many purposes is produced in the spider's abdomen. The silk glands open through tiny pores near the spider's hind end. The silk, which is liquid at first, is pushed out, and it hardens as soon as it meets the air. Another gland secretes gum to make it sticky.

Rajeev Sethi, Khandwa

YOUR PAGE

Yes, this is your page. You can send just anything you like for it. Your very own contribution or something you may have read in any other publication and liked very much (in which case please quote source and date of publication). Verification of facts, if any, will be your responsibility. We'll do just nothing about them except edit and print—if liked.

Maximum number of words you can pen down—450. Address your contribution to 'Your Page', Career & Competition Times, 10 Daryaganj, New Delhi-110 002.

Star And Careers



VIRGO

If you were born between Aug 22 and Sep 21, the Sun at the time of your birth occupied the sign Virgo. You are discriminative, critical and fastidious. The keynote to your character is a practical mentality. There is nothing haphazard and superficial about you. You are painstakingly thorough, methodical and exact. Your critical and discerning faculties are well-developed. Good service is your aim in life and you set about it in an intelligent way. You learn easily and are interested in all intellectual matters. You are trustworthy, decent, quiet and modest. You are usually gifted with considerable artistic and literary taste, but artistic endeavours are difficult for you as you cannot put the needed emotional expression into them. As a rule, you are slow to anger, but when hurt by others, you are slow to forgive and capable of long-sustained resentment.

You are dedicated to your work and exceptionally industrious. You even like routine work and are the sort to stay in the same position for a long time. You can make great sacrifices for the sake of an ideal or goal. You have a deferential nature and do not stir up antagonism in seniors. You may have many ups and downs in your struggle for security, but you will come out on top through effort and hard work.

You are discriminating in your choice of friends and are often shy and retiring, making few friends. You are quite particular about whom you meet socially. You are a good friend.

Your steady qualities inspire admiration and respect from all those with whom you come in contact. You accomplish whatever you set out to do because you stick to your job no matter how long it takes or how tiresome it is.

The coming year will be a much better year for you than 1985. Career and finances are likely to brighten up. If you are completing your education in 1986, jobs will be knocking at your door. However, from the first week of September till about the end of October 1985, you are likely to be misunderstood unless you are discreet in what you say and in your criticism of others. Your health may also need greater attention. In the academic sphere, guard against becoming overconfident. Money matters may cause problems from October end to middle of November. The period from middle of December to middle of March next year promises resounding success in educational activities, career and financial affairs. From middle of March to end of April your health may need more careful attention. From May onwards you are likely to make steady but sound progress. Your financial position is likely to improve and some notable person will come forward to boost your career. *Lachhman Das Madan, New Delhi*

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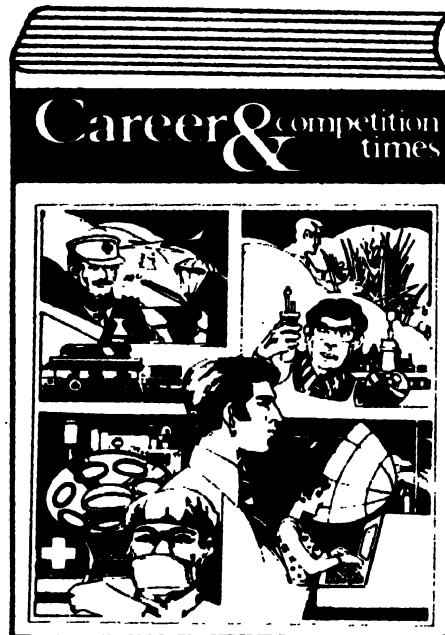
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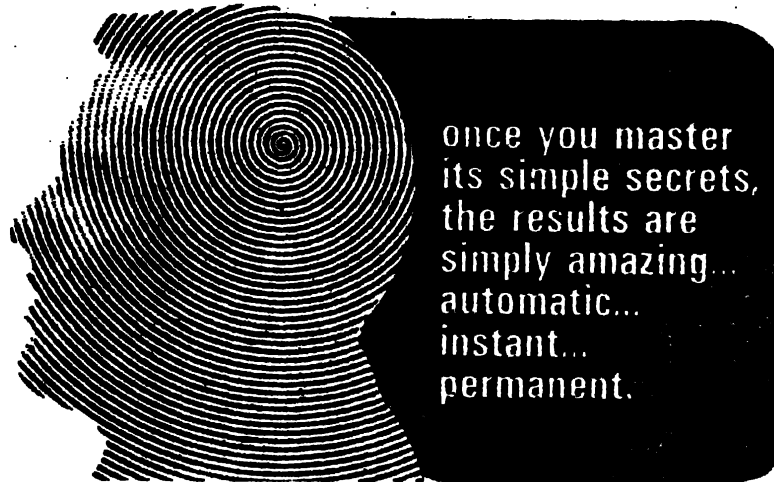
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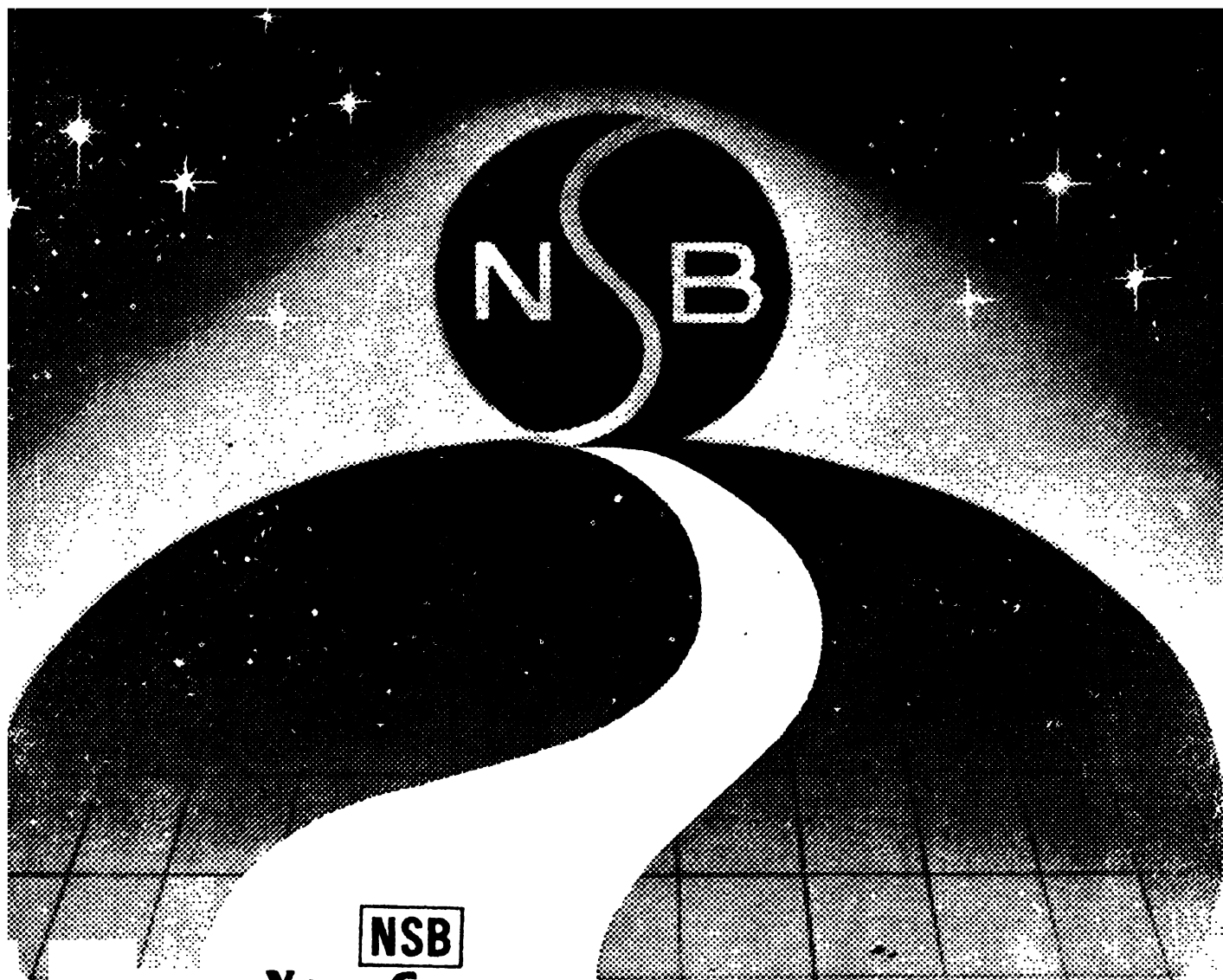
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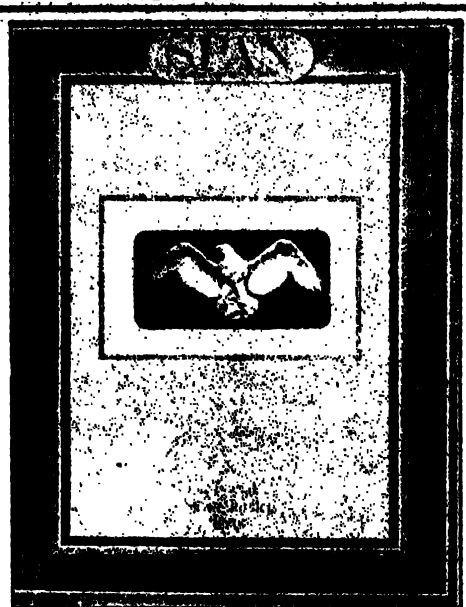
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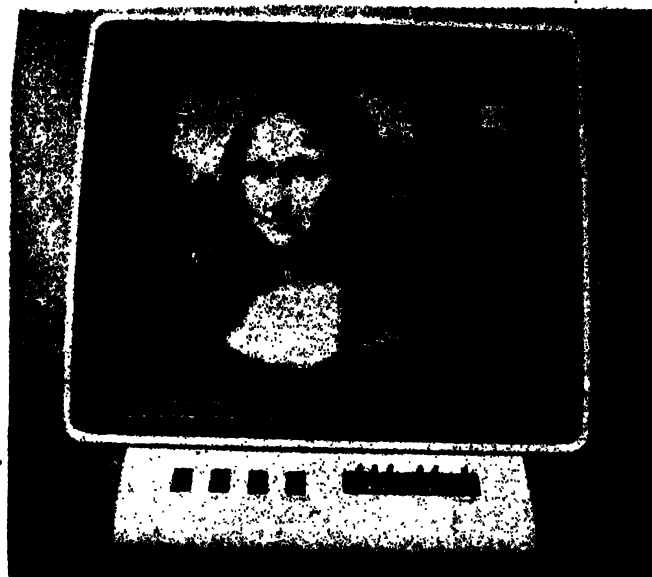
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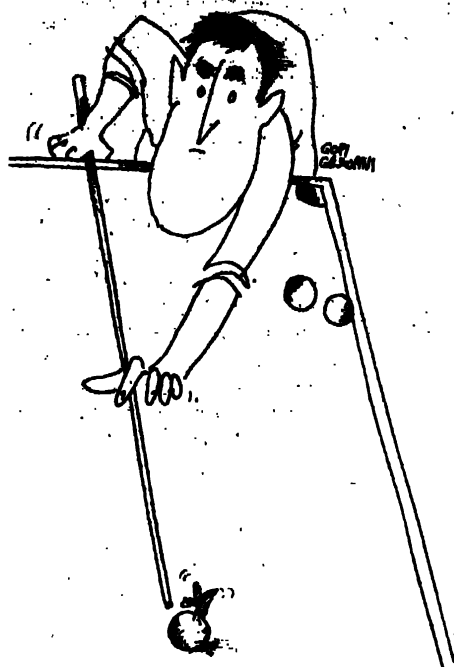


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LETTERS

Police The Police

In India we need a police to police the police.
Lalitendu Panda, Calicut

Best Letter: Rs 40

Is Peace Divisible?

Our country which preaches peace to the rest of the world doesn't find peace in her own land. Ironical indeed!

A. Rajeswari, Hyderabad

Prize-winning Letter: Rs 25

United We Stand

If our dictatorship is dangerously foolish, could Indian democracy praise it by nuclear retaliation? If the Indian people are democratically united and socially committed our freedom will be guarded by the last Indian alive.

Manojkumar Bhattia, Ahmedabad

Unity is bound

Towards prosperity we are bound.

Unity is needed in every activity.

And that unity may even lead to creativity.

Unity is needed for prospering minds.

Unity is seen in persons affectionate and kind.

In the world unity we have to bind.

Then a true, real, happy life we will find.

D. Chattermathan, Guntakal

Arms To The Fore

The extent to which arms are being accumulated by the superpowers is unfathomable. And now, President Reagan is unwell—his stars are warring (Star Wars) with each other. In the midst of this tension and anarchy, the peace programme 'Eureka' launched by President Mitterrand of France is a good gesture. All the countries should join hands to promote this promising programme.

Yogesh Kalra, New Delhi

Our world is now in the midst of an arms race so fierce that it has no parallel in history. Perhaps, our tryst with destiny has a nuclear dimension.

C.M. Dhatt, Ahmedabad

We could not have expected a better tribute from President Reagan than his Star Wars programme, on the 40th anniversary of Hiroshima.

Pradip Samantaryay, Embassawar

"If you want peace, prepare for war." The proverb holds true today. Reagan's fight to keep world peace will be much more effective than Rajiv's method of peace keeping.

Himadri Dawn, Calcutta

Chipko Parallel

Talking about the Chipko movement (*Did You Know That*, Aug '85), way back in 1787, in the reign of Maharaja Jorwant Singh II of Jodhpur, Amrita Devi, a brave Bishnoi lady, protested against the cutting of trees by the Maharaja's soldiers. She clung to the trees along with her two daughters. The

three were axed to death. At the same time 363 Bishnoi men, women and children met with the same fate. The Maharaja, on hearing this, immediately ordered his men to stop cutting the trees.

Shamim M. Khan, Jodhpur

Youth Triumph

Victory of Boris Becker (17) and victory of Geet Sethi (24) indeed are a triumph for the International Youth Year.

Manikrao N. Patil, Thane

Congress Centenary

The Congress(I) is busy celebrating the 100th year of the formation of the Congress Party. But the fact remains that the Congress(I) doesn't form the main body that brought India freedom. The erstwhile Indian National Congress (INC) subsequently broke up into a number of parties. Basically, all the leaders of the country are Congressmen.

Rajesh Kalra, New Delhi

Woman President

Milka Planinc is, at present, the President of the Federal Executive Council of Yugoslavia. Her position corresponds to that of a Prime Minister in some countries.

Yugoslavia Embassy, New Delhi

Population Explosion

Motivation should form the basis of family planning programmes, both at the national and international levels (*Population: Its Various Dimensions*, Aug '85). Otherwise our world, as Rebecca West warned, may become an 'over-crowded slum'.

S. Rajee Swaminathan, Allahabad

The present generation has an edge over the past generations in two important ways. Firstly it has the largest number of living beings. Secondly it has the largest number of lethal weapons to exterminate mankind.

Jeetendra B. Joshi, Bhavnagar

I was delighted to read the article *Population Its Various Dimensions* (Aug '85). The article was completely laden with facts and figures and threw light on every aspect of the problem.

Ranajee Sharma, Howrah

Terrorism's Motto

"Neither live nor let live." This is the updated version of "Live and let live".

Jai Jai Chaudhary, Nainital

Apropos *Hello Folks* (Aug '85) on terrorism, preaching for cooperation in this world is like building castles in the air. Terrorism will lead us to the road of annihilation only if we failed on the domestic front also. Hence it's high time we solved our own problems like poverty, regional imbalances, etc.

Prabhat Kumar, Patna

Twisted Development

Development: all around indeed—population, pollution, corruption, terrorism, violence, etc. We

certainly are a developing nation.

Rakesh K. Agarwal, Kanpur

Punjab Tangle

Chandigarh is to be transferred to Punjab, the river waters sharing problem has been entrusted to the Supreme Court and several other cases under dispute have been given to commissions etc. But, whether these steps would strengthen the unity of India or that of the Khalistan movement is yet to be seen.

Vinod Kumar Singh, Gonda (UP)

Partisan Laws

The article on the Supreme Court's decision scrapping the domicile requirement for admission into medical colleges (Aug '85) brought to light the partisan laws that were detrimental to the hopes and aspirations of deserving students and violated the right to education, employment and free movement.

Kandarp Jani, Surat

For The Governor

Why should the Governor's post be abolished when he has a lot of work to do like making speeches, hosting dinners, laying foundations, toppling governments, etc?

Neeraj Anu Jha, Patna

Sheer Callousness?

We often read about tight security arrangements for VIPs. But what is the government doing about the safety of common people?

Rajeev Jhingan, New Delhi

Hi-Tech India

Surely 1985 will go down in history as a year of resolutions, agreements and accords! Is our PM keen on introducing hi-tech in politics also?

K. Phani Raja Rao, Anantapur

Why do we tend to think of hi-tech only in terms of computers and robots? (Aug '85). With India's increasing population, we need to increase our food production and in such fields, hi-tech can play a crucial role. For instance, weather forecasting through satellites, genetic engineering giving rise to quality seeds and high productivity seeds, chemical fertilisers, scientific methods of irrigation, etc., can increase food production resulting in more employment opportunities in the agricultural sector.

Ali Akbar Teharally, Madras

Why do people cry for such minor things like water and food when our PM is giving us TVs and computers?

P.K. Amoorkar, Distt. Aungabad, Maharashtra

QUANTISLIP

In Quantitative Aptitude (Jul '85), read 80 instead of 80 π in Q. 4 and 10^{-6} instead of 10^{-7} in Q. 7. Also the answer to Q. 11 should read as (d); the solution:

$$\frac{L^2}{4} - \frac{1}{4} \pi \frac{L^2}{4} = A \text{ or } A = \frac{L^2}{4} \left(1 - \frac{\pi}{4}\right)$$

which gives $L = \sqrt{\frac{16A}{4 - \pi}}$

Hello folks...



A country of 748m is dazed and finds itself hamstrung, shattered and ineffectual because of the activities of a small, misguided group of persons who are under the influence of the criminal minded god fathers. In no time in history did the nation feel so dejected as it has in the last 10 months. The period may go down as the 'darkest period of the 20th century.' In the five major happenings—Indira Gandhi's assassination, bomb explosions in May 1984, the downing of Air India's Jumbo *Kanishka*, Lalit-Gitanjali Maken's murders and the assassination of Sant Longowal—what the terrorists will achieve ultimately is known only to their godfathers.

For us, three things are clear. Firstly, the terrorists have a sound knowledge of history and have linked their misdeeds with important historical dates: explosions in May were on the day Indian sepoy revolted against the Britishers; *Kanishka* exploded in the air on Sanjay Gandhi's death anniversary; and the Makens were murdered exactly nine months after Indira Gandhi's killing. And the Sant was shot dead on Rajiv Gandhi's birthday.

Secondly they are well trained, well-supported and well-linked by and with certain powerful vested interests inside and outside the country. The way they plan their strategy, implement it and disappear into thin air indicates that some shrewd minds are backing them.

Thirdly, to say that the terrorists are motivated by a religious fervour is absurd. The way they have been operating proves that they are least concerned with religion and their operations will never fulfil any religious cause.

A terrorist, a supporter of violence and intimidation especially for political purposes, is not motivated by an ardent con-

cern for human welfare. He is remote controlled and, more often than not, does not know whom and what he is working for. Brain washed and usually drugged he becomes a sadist. Many terrorists who have been arrested have proved this theory.

For whom is the Sikh terrorist working? Definitely not on behalf of Sikhs in India. Every Sikh in India knows that he cannot benefit by isolating himself from the Indian mainstream. Being a farmer, trader, industrialist or warrior, he knows that he needs wide support and a broad area to operate. He would lose economically if his area of activity were to be narrowed.

The large section of Sikhs settled abroad could not be behind the terrorist activities. They cannot benefit if the turmoil and the terror-stricken atmosphere in Punjab continues since a bulk of their relatives and even families live there.

It is, therefore, not difficult to understand who is supporting the terrorists. World history is replete with examples where terrorist activities have been deliberately used by countries to destabilise the political and economic set-up of another country. It is only when powerful foreign nations are supporting the terrorists that their control and arrest becomes difficult. Terrorism is an indirect and unannounced war. The American experts call it low intensity war and have used it widely to dethrone governments.

There is sufficient evidence to believe that certain foreign powers are patronising the terrorists. The RAW had prepared a report in 1984 detailing extensively the Pakistan connection in Sikh terrorism. It gives an accurate datewise account of Pakistani involvement till the time of Operation Bluestar. Indian agents from the IB have trained themselves in Pakistan posing as Sikh extremists. In fact, Sahebzada Yakub Khan, Pakistan Foreign Minister, was shown numerous files on the Pakistan connection.

The American and European governments are contributing in various ways. Commando schools, for mercenaries, particularly Frank Company in Alabama, are quite well known. Canadian newspapers are carrying advertisements offering mercenaries \$1,250 per month to train people in the use of weapons and combat techniques to "help them take over the state of Punjab in India." The photographs of a training school in British Columbia were given to the Canadian Government by the Indian Government. The latest reports are that the Sikhs are being trained by the IRA in sabotage

techniques. The terrorists are openly buying sophisticated arms from West Germany and Switzerland.

More alarming are newspaper reports from England that the young extremists are receiving encouragement from the Conservative Party, if not from the Conservative Government. This was evident at the recent annual meeting of the Anglo-Asian Conservative Association held in the Conservative Party office. In return, a number of Tory leaders have been honoured with *Sarapas*.

Why should the foreign powers be interested in destabilising India? It is an old design. M. Rasgotra, the former Foreign Secretary has written about a US State Department policy paper (in 1950) expressing fear that the vigour and inflexibility of India's attitudes and policies, if not controlled, could make India Japan's successor in Asian imperialism. The fear seems to be coming true! The US views India as "a major power in Asia."

The developed countries are not in a happy economic situation. Their rates of economic growth are either falling or stabilising at low levels. This is due to demand saturation as almost everyone has everything, even much more than what he and his family needs. These economies have also become high cost economies and, therefore, their exports are no longer competitive. The expanding markets are in Asia and Africa and many of these markets are not favourable to the US. Because of its support to Israel, a large number of the US manufacturers, like Coca Cola, cannot sell their stuff in Islamic countries. China, considered a potential market and explored by the US during the Nixon Administration, has not shown inclination to give a long hand to the Americans.

India has a huge domestic market. Imagine the sales if each Indian spends an additional Rs 10 per year... Rs 748 crore. The country has also developed a strong infrastructure, an army of well-trained and highly skilled manpower and has achieved a breakthrough in computer and electronic industries. With a diversified industrial set-up, Indian goods are welcome in the international markets.

It is an old strategy that if you want to hit the economy of a country, paralyse its government. That is exactly what certain foreign powers are doing.

What are you going to do?

L. H. H. H.

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Tick the word or phrase you believe is *nearest in meaning* to the key word:

1. **amenities**: A: general pardon B: changes in the wording of a law C: something that makes life easy D: peaceful living
2. **blight**: A: pitiable condition B: cry of a sheep C: moral defect D: evil influence
3. **choke**: A: to block up B: bite noisily C: throw up D: cut into pieces
4. **diminutive**: A: lacking intelligence B: unusually small C: very slow D: lacking in spirit
5. **elate**: A: to make happy B: compel to leave C: select D: cause fear
6. **espouse**: A: to support B: catch sight of C: avoid D: consider
7. **forum**: A: exchange of views B: conference for discussion of a subject C: any place for public discussion D: wooden structure
8. **furor**: A: confusion or disorder B: punishment for wrongdoing C: bitter protest D: a fit of great rage
9. **hoax**: A: stupid act B: an act intended to dupe C: innocent deception D: practical joke

10. **hum**: A: to sing with closed lips B: lower the dignity of C: sigh D: cling to
11. **intransigent**: A: savage B: irrational C: uncompromising D: flexible
12. **intrepid**: A: cowardly B: fearless C: lethargic D: humble
13. **pelt**: A: to strike with missiles B: harass C: crush D: push hard
14. **perpetrate**: A: to commit a crime B: keep safe C: continue to do regularly D: punish cruelty
15. **prosecute**: A: to start legal proceedings against B: denounce C: expel D: declare
16. **quadruple**: A: to make four times as much B: divide in four C: dance in fours D: make a four-sided figure
17. **ravine**: A: deep narrow valley B: enthusiastic praise C: unreasonable anger D: large black bird
18. **rubble**: A: disorderly crowd B: bits of broken stone C: low-lying area D: flat, broad piece of wood
19. **serf**: A: slave B: angel C: junior person D: white foam
20. **skirmish**: A: fierce argument B: trickery C: small battle D: woman's garment

(Answers on page 53)

THOUGHTS

Prisons are big business in the US. At times prisoners are used for committing crimes. They are never caught because they are supposed to be behind bars.

Adil Shahryar in *The Hindustan Times*

"Writing a poem is like a short love affair. Writing a short story like a long affair. Writing a novel like marriage."

Israeli novelist Amos Oz, in *The Sunday Observer*

Unfortunately the electoral battles are usually fought without gloves.

I K. Gujral in *Indian Express*

The enemy of the rich is not poverty but sufficiency.

Jeremy Seabrook in *The Guardian*

Democracy claims to be a superior and civilised system because it counts heads instead of breaking heads. In India, the counting of heads has been followed by the breaking of heads.

This drives home the lesson that democracy and elections are not enough. There must be a basic consensus in a society if it is to survive peacefully, and the majority must be able to carry the minority with it, at least in terms of principle. If democratic elections are seen merely as devices used by the majority to hit the minority on the head, all hell will break loose. Policies are needed which will weld together different sections of society and give them a national sense of purpose. Such policies can be implemented seriously only if politicians in power obey certain norms of morality and principle.

Swaminathan S. Aiyar in *Indian Express*

A little learning is a dangerous thing;/Drink deep, or taste not the Pierian spring;/There shallow draughts intoxicate the brain,/And drinking largely sobers us again.

Alexander Pope

Nearly all our best men are dead! Carlyle, Tennyson, Browning, George Eliot!—I'm not feeling very well myself!

Punch

We only confess our little faults to persuade people that we have no large ones.

Duc De La Rochefoucauld

A man who is good enough to shed his blood for his country is good enough to be given a square deal afterwards. More than that no man is entitled to, and less than that no man shall have.

Theodore Roosevelt

Choose an author as you choose a friend.

Earl of Roscommon

Death is one of two things. Either it is annihilation, and the dead have no consciousness of anything; or, as we are told, it is really a change: A migration of the soul from this place to another.

Societes

Everything is good when it leaves the Creator's hands; everything degenerates in the hands of man.

Jean-Jacques Rousseau

It is far from easy to determine whether she (Nature) has proved a kind parent to man or a merciless step-mother.

Pliny, The Elder

QUOTABLE QUOTES

All punishment is mischief: all punishment in itself is evil.

Jeremy Bentham

My time has not yet come either, some are born posthumously.

Friedrich Nietzsche

The more intelligence one has the more people one finds original. Commonplace people see no difference between men

Blaise Pascal

He was sent, as usual, to a public school,

where a little learning was painfully beaten into him, and from thence to the university, where it was carefully taken out of him

T.L. Peacock

The man who makes no mistakes does not usually make anything.

E.J. Phelps

Ignorance of the law excuses no man; not that all men know the law, but because 'tis an excuse every man will plead, and no man can tell how to refute him.

John Selden

THE FREEDOM MOVEMENT

100 YEARS OF CONGRESS



The latter half of the 19th century saw the emergence of a centralised imperialist power located in London and supported by the steel-frame of a highly efficient bureaucracy and a well-organised army in India. On the receiving end were the teeming Indians—poor, illiterate, disarmed, divided. Sandwiched between the two was a small, scattered and urbanised Indian middle class, ready to absorb modern ideas and critical in its attitude towards political and economic issues.

Indian nationalism gained respectability with the advent of Raja Ram Mohun Roy as a pioneering social reformer. Socio-political organisations also started coming up. In 1828, Academic Association was formed to debate political, religious and moral issues. Ten years later, Society for the Acquisition of General Knowledge was set up to discuss issues like trial by jury and the freedom of the press. In 1842, Dwarkanath Tagore invited George Thompson, famous in England for organising the slavery agitations, to guide political movement in India. Similar organisations were established in other parts of the country and the Indian leaders tried to form an all-India political body. At this time, A. O. Hume (1829-1912), a retired British civil servant, formed the Indian National Union (INU) in 1864. It appears he consulted and got the approval of Lord Duf-

ferin. Modern India... What went into the making of its fabric? Personalities, events and forces of history... above all, Indian nationalism and its *raison d'être*, freedom from the humiliating clutches of British domination... For over 60 years the Indian National Congress (INC) was its dynamic bulwark. And 38 years after Independence it is still in the limelight of national consciousness.... A review of the historic struggle and the role played by the INC.

ferin, the then Governor-General of India. Dufferin wanted to know the real voice of the people and thought that a conference, to be convened by Hume, would be good. Hume then visited England to consult India's well-wishers and was assured their help. He returned to participate in the conference, convened by the INU at Poona from Dec 25, 1885. Since the INU received country-wide support, it was named Indian National Congress (INC). The venue of the conference was at the last moment changed from Poona to Bombay. Held at the Gokuldas Tejpal Sanskrit College, it was attended by 72 delegates from all over India. W.C. Bonnerji, an eminent lawyer of Calcutta, was chosen the President.

The aims of the INC were: (a) to promote friendly relations among nationalist-minded political workers from all over India; (b) develop and consolidate feelings of national unity; (c) formulate popular demands and present them before the government; and (d) create public awareness. Questions regarding why Hume took active interest in the formulation of the INC were raised. Though various explanations were offered, the one given by Lala Lajpat Rai in *Young India* that Hume wanted to prevent the disruption of the Empire, gained wide acceptability.

The situation in India in the 1870s was explosive. Discontent was on the rise after

the 1877 famine. Hume, the then Secretary of the Government of India, knew that there was an imminent danger of a mass upheaval. He and other Britishers were afraid that the educated Indians might lead a mass revolt against the British Government. A safety valve was, therefore, needed urgently. The INC was to provide a powerful and constitutional outlet to the discontented among the educated Indians to checkmate popular revolt. This may be marginally correct as the INC was the natural outcome of the efforts of politically conscious Indians to set up a national organisation for the political and economic advancement of the country. Dadabhai Naoroji, Badruddin Tyabji, Pherozeshah Mehta, P. Ananda Charlu, Surendranath Banerjee, Ramesh Chandra Dutt, Ananda Mohan Bose and Gopal Krishan Gokhale were the INC's great presidents in its early years.

The dynamic idealism of the Congress elicited varying reactions from different classes. The feudalists, whether Hindu or Muslim, were panicky and clung to the British Government. The business class, taking a long term view, moved towards Congress. The British policies were against their interests and the Congress wanted their cooperation in the economic development of India. The masses identified themselves with the Congress; it became their real well-wisher and representative.

The government, in the beginning, was mildly interested in the Congress. In 1886, Dufferin invited the delegates to a reception at Calcutta. Similar courtesies were extended at the next session in Madras. The government even allowed its officers to attend the Congress sessions. However, by 1888, the attitude changed completely. The resolutions demanding responsible government, speeches criticising the government policies and pamphlets on India's grievances irked the government as all this looked similar to Ireland's Home Rule movements. In fact, the emergence of the Congress crystallised the inherent conflict in the relations between the imperialist power and its subject—the people of India. The conflict raised the moral issue: On what justification did the British Empire demand obedience from the people of India?

The British thought that India as such did not exist. To them, India was merely a geographical expression, a territory consisting of different clans, tribes, communities, races, religions and cultures which did not provide an organic, social or moral unity. The Britishers, therefore, had as much right to rule over them as rulers who had preceded them. They too conquered India with the sword and established peace and order in the land. In addition, they had given a modern administration, a judicial system and an efficient bureaucracy.

The counter argument was that India had a cultural unity, a dominant ancient culture and a number of minority cultures. More important was the emergence in India of a consciousness of a political unity that gave it the status of a nation. Congress presidents one after the other, stressed this point. The INC symbolised this consciousness

the unconvinced Britishers. The British Native Policy which had two objectives: to supply cheap labour for European enterprises; and to prepare the Indians to accept their supremacy. The latter was to be achieved by providing good government and by understanding and humouring them. The Britishers succeeded admirably in this regard. The educated class, which could not be won over, was the only exception. However, their number was very small—hardly two per cent of the total population. Congress was the organisation of this two per cent, though it concerned itself with the aspirations of all classes. Interestingly, Sir Syed Ahmed Khan exhorted the Muslims to remain aloof from the Congress and support the British rule.

The INC met every year to focus people's attention on the basic defects and temporary lapses of the government. Political conferences were convened all over India. The need for publicity outside India, especially England, was recognised in 1889, when the British Committee of the INC was set up in England with William Wedderburn as Chairman. *India*, a journal, was founded to propagate Congress views.

From almost the very beginning, the Congress had within it a school of militants which did not approve of its supplicatory attitude. Leaders of this school were: Bal Gangadhar Tilak of Maharashtra, Bipin Chander Pal of Bengal and Lala Lajpat Rai of Punjab. They believed that India would not progress under "the benevolent guidance" and control of the Britishers and wanted *Swaraj* or independence—the goal of the national movement—to be achieved through mass agitation.

On Oct 16, 1905, Lord Curzon divided Bengal in the name of 'administrative efficiency'. The real reason, however, was to stem the tide of nationalism in Bengal. The INC firmly opposed the partition and Oct 16 was declared a day of national mourning throughout Bengal. The leaders felt that demonstrations, public meetings and resolutions were not much effective and, therefore, wanted more positive action. The *Swadeshi* movement—public burning of foreign cloth and picketing of shops selling such cloth was launched. *Swadeshi* and *Swaraj* movements were picked up by other provinces.

The anti-partition movement soon passed into the hands of militant leaders. The reasons: the previous movements by the moderates failed; the East Bengal Government tried to crush the movement by dividing the Hindus and the Muslims; and the repressive policy of the government. The militants gave a call for 'passive resistance', besides the *Swadeshi* and boycott movements. The people were asked to boycott government service, courts, government schools and colleges. They, however, lacked sound organisation and effective leadership. The movement could not reach the masses and remained confined to urban-middle and lower-middle classes. The government, therefore, could crush it easily. The fire of nationalism, however, kept burning.

The agitation against the partition of Bengal made a deep impact on the INC. At

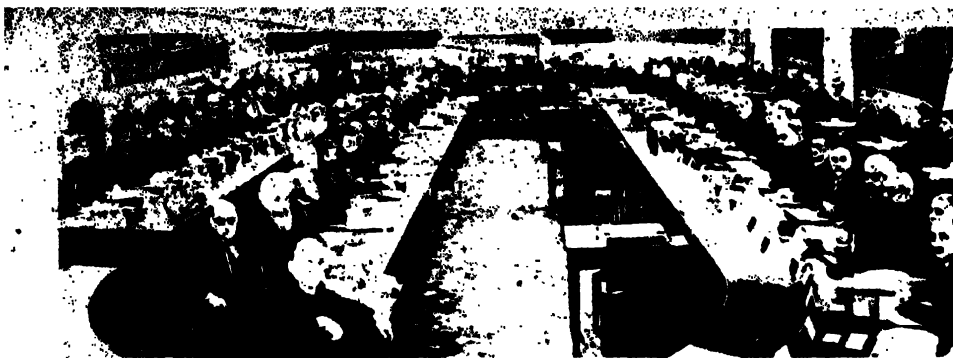
well as the reactionary regime of Lord Curzon. There was, however, disagreement between the moderates and the militants, also known as extremists. The former wanted to confine the movement to Bengal while the latter called for its extension to the whole country. The two groups fought for the presidency in the 1905 session. Dadabhai Naoroji was elected as a compromise President. He saved the situation by declaring that the aim of the national movement was *Swaraj* or 'self-government'. The differences, however, could not be patched up and the split came in the December 1907 session at Surat when the moderates captured the Congress.

The split did not prove useful to either group. The moderates lost touch with the youth wing of the Congress. The government, with the policy of divide and rule, tried to win over the moderates to isolate and suppress the militants. Constitutional concessions were announced through the Indian Council's Act 1909 known as Morley-Minto Reforms. Also announced in 1911 was the cancellation of the partition of Bengal and the shifting of the capital from Calcutta to Delhi. The reforms raised the number of elected members in the Imperial Legislative Council and Provincial Councils. However, the undemocratic and foreign character of British rule in India and the economic exploitation of the people remained unchanged. The Britishers continued to confuse the moderates, divide their ranks and check unity among the Indians. In the name of protecting the Muslim minority, the reforms introduced separate electorates. The objective was to divide the Hindus and Muslims so that British supremacy was maintained. Though the moderates did not fully support the reforms, they cooperated with the government in its implementation. They thus lost ground to the extremists who became more popular.

After the 1857 revolt, for over a decade the British wrath fell on the Muslims. The Britishers adopted an anti-Mohammedan and pro-Hindu policy. Gradually, the Britishers realised that the situation was changing as the threat from the Muslims had passed over, because the mutiny, the last bid for supremacy, had been crushed. The government also visualised danger from the growing middle classes—westernised and capitalistic—which were overwhelmingly Hindu.

Sir Syed Ahmed Khan and Prindpal Beck of M.A.O. College, Aligarh, particularly worked for Anglo-Muslim friendship. Sir Syed, however, founded Muslim communalism in the 1880s by giving up his earlier views and declaring that the political interests of Hindus and Muslims were not similar but different, even divergent. He propagated complete obedience to the Britishers and said that whenever they decide to leave India, the Hindus, being the overwhelming majority, would overpower the Muslims. He urged the Muslims to ignore Badruddin Tyabji's appeal to join the INC.

The separatist tendencies, also among



Opening of the First Plenary Session of Round Table Conference on India in London.

the educated Muslims, reached a climax in 1906 when the Muslim League was formed under the leadership of the Aga Khan, the Nawab of Dacca and Nawab Mohsin-ul-Mulk. The Muslim League supported the partition of Bengal and demanded special safeguards for the Muslims in government service. Later in 1909, the government helped them in getting separate electorates. Thus while the INC was fighting against the imperialistic, economic and political policies, the Muslim League's political activities were directed against the INC and Hindus. Hereafter, the League opposed every nationalist and democratic demand of the Congress.

During World War I, the Congress adopted a pro-British attitude in the mistaken belief that Britain would repay India's loyalty by granting self-government. However, a few believed that concessions would not be forthcoming unless popular pressure was brought to bear on the government. But this could not be done under the leadership of the moderates who were merely passing respectful resolutions at the Congress sessions. Therefore, two leagues were started in 1915 and 1916—one under Tilak and another under Annie Besant—to propagate Home Rule or self-government after the War. Tilak gave the famous slogan: "Swaraj is my birthright and I shall have it."

The Lucknow session in 1916 was important for two reasons: First, the two wings of the Congress, which had split in 1907, were re-united as they realised that disunity was self-defeating. Second, the Congress and the Muslim League came together by signing the famous Lucknow Pact and placed their common political demands before the government. Though a positive step towards Hindu-Muslim unity, it, unfortunately, in the long run, caused the resurgence of communalism in Indian politics, as the Congress accepted separate electorates for Muslims. Nevertheless, the immediate effects of the Pact were tremendous. The British Government felt it necessary to placate the Congressmen because of the INC-League unity. On Aug 14, 1917, the British Government announced that its policy in India was "the gradual development of self-governing institutions with a view to the progressive realisation of responsible government in India as an integral part of the British Empire". This is known as 'The August Declaration'. This was followed by the declaration of Montagu-Chelmsford Reforms on Jul 8, 1918. But the INC was

not appeased. Tilak regarded the reforms as "entirely unacceptable" while Annie Besant considered them "unworthy of England to offer and unworthy of India to accept". A special Congress session in Bombay on Aug 27 the same year declared that the reforms were "disappointing and unsatisfactory". In December 1918, the Delhi Congress session confirmed the resolution passed at the special session.

The last phase of the national movement was the Gandhian Era (1920-1947) during which Mohan Dass Karam Chand Gandhi converted the INC into a fighting force and a revolutionary organisation, non-violent in character but of tremendous strength and potentiality. His political strategy of satyagraha galvanised the millions of Indians into action against the British Raj and baffled the imperial might of Britain. The emergence of Gandhi as the Congress leader in 1920 was timely as the national movement lacked imaginative leadership. Gokhale and Tilak had died. Lala Lajpat Rai had by now become a moderate. Terrorism and constitutionalism, the two recognised methods of political action, offered no hope. A towering personality equipped with a new strategy of political warfare was required. Gandhi guided the thoughts, aspirations and activities of the nation till the end of his life.

The Montagu-Chelmsford (Montford) Reforms led to the enactment of the Government of India Act 1919, providing enlarged Provincial Legislative Councils with the majority of elected members. The system of communal representation was further strengthened and 'Dyarchy' or dual government was introduced in provinces. Subjects were divided into 'reserved' (to be administered by the Governor-in-Council), and 'transferred' (under ministers responsible to the provincial legislature) categories. However, the governor could overrule them. There were provisions giving the Central Government complete control over the provinces. The Congress, however, rejected the reforms.

In pursuance of its policy of reform and repression, the government was acquiring additional powers in the name of suppressing terrorist activities. The Rowlatt Act was enacted whereby a person could be imprisoned without trial and conviction in a court of law. The members of the

Satyagraha Sabha, founded by Gandhiji in February 1919, pledged to disobey the Act and get arrested. This was a **satyagraha** unknown to the Britishers.

In April 1919, came the Jallianwala tragedy. The national agitation against the repressive measures like the Rowlatt Act brought the Hindus and the Muslims together. The Muslims had turned against the Britishers because of the treatment given to Turkey after the World War I. **Khalifa**, the Turkish head of the state, (also the temporal and spiritual head of the Muslims all over the world) directed them to rise against the Britishers. In India the Khilafat Committee was formed.

An All-India Khilafat Conference was held in Delhi in November 1919 which decided to withdraw all cooperation to the government if their demands were not met. The League, now under the leadership of non-separatists, gave support to the Congress. The Congress leaders, Tilak and Mahatma Gandhi included, viewed Khilafat agitation as a golden opportunity for Hindu-Muslim unity and for bringing the Muslims into the fold of the national movement. Meanwhile, the government refused to amend the Rowlatt Act, to make amends for atrocities in Punjab, and to give self-government to India. In June 1920, an all-party conference was held at Allahabad. It approved a programme of boycott of schools, colleges and courts. The Khilafat Committee launched a non-cooperation movement on Aug 31, 1920. Mahatma Gandhi was the first to join in. He returned the Kaiser-i-Hind Medal, awarded to him by the British Government during World War I. The Congress met in a special session in 1920 at Calcutta to support Gandhiji's plan for non-cooperation till the Punjab and Khilafat wrongs were undone and Swaraj established.

The Nagpur Congress session in December 1920 confirmed the programme finalised in Calcutta. Gandhiji declared that if the Britishers "do not want to do justice, it will be the bounden duty of every Indian to destroy the Empire". The session also amended the INC constitution. A Congress Working Committee (CWC) of 15 members, including the President and secretaries, was formed to enable the Congress to function continuously and implement its decision. Any person of 21 years age could become a member of the Congress on payment of four annas (25 paise). In 1921, the age limit was relaxed to 18. With all this, the Congress changed its character and role. It became the leader of the Indian masses in their national struggle to gain freedom. A few old leaders of the Congress did not believe in new methods and opposed strikes, satyagraha, breaking of laws, and courting of arrests. Mohammad Ali Jinnah, G S Khaparde, Bipan Chander Pal, Annie Besant were among the prominent leaders who left Congress at this stage. The years 1921 and 1922 witnessed unprecedented movement when thousands of students left their schools and colleges, and hundreds of lawyers gave up their practice. The All-India Khilafat Committee passed a

MAJOR EVENTS



Demonstration against Simon Commission—1927.

Act For The Better Government Of India 1858: Abolished the Court of Directors and the Board of Control (established by Pitt's India Act 1784) and authorised the Queen of England to rule India. A new office for Indian affairs, Secretary of State for India (a Minister in the British Cabinet) was created. Council of 15 members was to assist him. System known as Home Government. Besides the Governor-General to be appointed by the Crown. All treaties made by the company to be binding on the Crown.

Queen's Proclamation Nov 1, 1858: The assumption of the Government of India by the Crown declared at Allanabad Darbar. When Lord Canning read Queen's Proclamation, which, among other things, promised peace and prosperity, equality of treatment with other subjects of the Queen and above all, a share in the higher services of India. It assured Indian princes of their rights, dignity and honour. Viscount Canning to be the first Viceroy (Queen's representative in respect of states) and Governor-General of India.

Indian Councils Act 1861: Dealt with Executive and Legislative Councils in India; the British Government realised danger of making laws for millions of Indians without consulting their views. The Executive Council of the Governor-General enlarged. A fifth ordinary member added to it. The Governor-General's Executive Council reinforced by some additional members, to serve as the Central Legislature of India. The additional members to be not less than six and not more than 12. Out of these 'Additional Members', not less than one-half to be non-officials (i.e. persons not in the service of the Crown) and some of them to be Indian. No principle of election whatsoever. The

resolution that no Muslim should serve in the British Indian Army. The Ali brothers were arrested for sedition. The Congress stepped up the agitation by permitting Provincial Congress Committees to start civil disobedience including non-payment of taxes, provided the people were ready. The government resorted to repression. All important leaders, except Gandhiji, were jailed. The Congress session in December

Governor-General to nominate them and they were to hold office for two years. This Legislative Council could make laws and regulations for all persons, for all courts of justice, for all places and things and for all public servants in and outside British India. The Governor-General, however, had an absolute right of veto to alter or revoke anything done by this Council.

Indian Councils Act 1892: The first result of the efforts of the Congress. In its first session in 1885, it had demanded expansion of Legislative Councils. This Act extended functions of these Councils. Although the local bodies were given some powers to elect their representatives, the term 'Election' was deliberately and carefully avoided.

Indian Councils Act 1909: Embodied the Morley-Minto Reforms. Considered an important stage in the development of representative institutions in India. Introduced significant changes in the administrative setup of the country. Further expansion in the Central and Provincial Legislative Councils. Principle of separate communal electorates introduced. Had a very great effect on the events that followed. Ultimately led to the partition of the country in 1947.

World War I and Montagu Declaration Aug 20, 1917: During World War I, the Congress supported the British war effort in the hope that the government, in gratitude, would grant Dominion status to India after the war. It had no such intention. Instead, the then Secretary of State, E. S. Montagu, made a declaration in the House of Commons, laying down two main principles of a new policy—(a) the increasing association of Indians in every branch of administration and (b) the gradual development of the self-governing institutions with a view to progressive realisation of responsible government in India as an integral part of the British Empire.

Montagu-Chelmsford Reforms: In pursuance of his declaration, Montagu arrived in India on Nov 10, 1917 and drew up a scheme along with Lord Chelmsford. Also consulted the Congress and the Muslim League. This scheme known as Montagu-Chelmsford Reforms, proposed: (a) popular control over local bodies; (b) partial responsibility or dyarchy in the provinces; (c) increased opportunities of influencing government without any responsibility; (d) relaxation of the control of the Secretary of State over the Government of India and the Provincial Government.

Government of India Act 1919: Enacted on the basis of Montagu-Chelmsford Report. Led to the relaxation of the control of the Secretary of State for India in certain matters. Some structural changes in the Indian Council. Provided for appointment of the High Commission of India. All these changes were cosmetic in nature. Real control of the British Parliament through the Secretary of State for India maintained in this Act. Viceroy's Executive Council slightly

1921 at Ahmedabad resolved to continue the movement till Swaraj was established. On Feb 1, 1922, Gandhiji announced that he would start mass civil disobedience, along with non-payment of taxes, unless within seven days all the political prisoners were released and the freedom of the press was ensured. This mood of struggle was transformed into a retreat when on Feb 5, 1922 the police opened fire on a Congress

meeting. Some significant changes made in the Central Legislature. It was to consist of two chambers—the Council of State and the Legislative Assembly. Both these Houses to be made more representative and influential. A new form of government called dyarchy introduced in some of the provinces. The Congress severely criticised these reforms.

The Swarajists and the policy of obstruction: Congressmen who organised themselves into the Swarajist Party with a programme to wreck the legislature from within through uniform, continuous and consistent obstruction. Came into being in 1922 when civil disobedience movement withdrawn by Gandhiji. C.R. Dass and Moti Lal Nehru prominent leaders of the Swarajists. Staged an impressive triumph after the elections in 1923. A big force in the legislatures.

Simon Commission (1927): Stanley Baldwin's Conservative Government appointed an all-white commission with John Simon as Chairman to look into the working of the Indian Government and to propose further reforms, if necessary. It landed in Bombay on Feb 3, 1928, but boycotted by the Congress mainly on the ground that no Indian was associated with it. Recommended: (1) dyarchy be abolished and ministers be entrusted with full control of provincial administration. (2) franchise be lowered and extended; (3) a council of Greater India be set up as an all-India, federation was impossible in the near future. (4) Burma be separated from India and Sind from Bombay; (5) army be modernised but maintenance of British forces necessary. Some of the recommendations were incorporated into the Government of India Act 1935.

Nehru Report (1928): All Parties Conference held and a committee appointed under the Chairmanship of Pt Moti Lal Nehru to draft a Constitution satisfactory to all in India. The committee submitted a report as under: (1) Dominion status and not complete independence India's political objective. (2) India to be a secular state. (3) The system of joint electorates with some reservations best suited to the country. (4) An All-India Federation be formed.

First Round Table Conference (1930-31): Nehru Report as the Basis for Constitution of India rejected by government. Lord Irwin invited the Congress and others for a conference in London to sort out matters. Congress wanted an assurance that it will proceed on the basis of granting full dominion status to India. The government did not accept this condition. Gandhiji launched another civil disobedience movement. The first session of RTC was opened on Nov 12, 1930 at James Palace, London without the Congress.

Gandhi-Irwin Pact 1931: Signed by Gandhiji and Lord Irwin, the then Viceroy of India. The Congress discontinued the civil disobedience movement and the government

procession in Chauri Chaura, a village in Gorakhpur district of UP. The crowd in retaliation, burnt the police station killing 22 policemen. Gandhiji took a serious view of the incident as he had asked the people to be non-violent. He withdrew the agitation.

The CWC in its Bardoli (Gujarat) meeting on Feb 12, 1922 decided to withdraw the movement. It urged the Congressmen to



Mahatma Gandhi with Rajendra Prasad and Maulana Azad, Bombay Congress Session—October 1934.

released all political prisoners not wanted for violent acts. The Congress also agreed to participate in Second Round Table Conference.

Second Round Table Conference (1931-32): Met in September 1931. Gandhiji the sole representative of Congress. Jinnah represented the Muslim League. The British Government was not prepared to cede powers. Gandhiji returned without any success and civil disobedience renewed.

Communal Award 1932: Lord Ramsay MacDonald's Communal Award favoured separate electorates for every conceivable group—the Hindus, Muslims, Sikhs and Europeans; seats also reserved for women, labour, commerce, landholders and others. Attempted to separate the so called 'caste Hindus' from the scheduled caste Hindus.

Gandhiji's fast unto death and Poona Pact 1932: Gandhiji started his fast unto death in protest against the Award. Finally the Poona Pact was signed. It was concerned mainly with reservation of seats etc pertaining to the scheduled castes. On the acceptance of Poona Pact by the British PM, Gandhiji terminated his fast.

Third Round Table Conference 1932: Held in November 1932. Not attended by the Congress. Though not a success, emergence of idea for creating an Indian federation a tangible achievement.

The White Paper (1933): On the basis of Round Table Conferences, the British Government prepared White Paper proposals which formed the basis of the Government of India Act 1935—(1) Responsible government to be set up in provinces, which were to be autonomous as far as possible. (2) Recommen-

devote themselves to constructive work like *charkha* spinning. The sudden halt to the movement stunned the country. The reaction was a mixed one. Subhash Chandra Bose in his autobiography *The Indian Struggle* wrote that it was "nothing short of a national calamity". Jawaharlal Nehru had a similar reaction. The government, however, took full advantage of the situation and arrested Gandhiji on Mar. 10,

and establishment of Federation of British Indian Provinces and Indian States with a bicameral Legislature at the Centre. (3) Provided demarcation of spheres of Federal and Provincial legislatures. (4) Suggested establishment of Federal Court, Advisory Council, Reserve Bank, Federal Railway Authority, etc.

Government of India Act 1935: A very long and complicated statute, contained 451 clauses and 15 schedules in addition to provisions for the proposed federation and the provinces along with many others of an administrative nature. Came into force completely in April 1937.

August Offer (1940): Made on Aug 8, 1940, promised establishment of full-fledged responsible government on dominion model after the war. Recognised right of Indians to frame their own Constitution and assured minorities that no Constitution would be framed against their consent. Also proposed interim arrangements during the war. Failed to achieve its objective of securing Congress participation in British war effort.

The Cripps Mission (1942): National and international events compelled British Government to send mission to India in 1942 to solve the constitutional issue. Stayed in India from Mar 23 to Apr 13, 1942. Proposed both long-term and interim measures. But failed for a number of reasons.

Quit India Movement (1942): On Jul 14, 1942 Congress Working Committee at Wardha passed 'Quit India Resolution', demanding immediate, complete and unconditional British withdrawal from India. Gandhiji and other leaders arrested and the agitation that followed brutally suppressed.

The Cabinet Mission (1946): Headed by Lord Patrick Lawrence (the then Secretary of State for India), along with Sir Stafford Cripps (President of Board of Trade) and A.V. Alexander (The First Law of Admiralty). Suggested proposals for a long-term settlement, for constitution-making and for interim government. Accepted by the Congress, the Muslim League and the Sikhs. The Muslim League, however, withdrew its support on Jul 29 and gave a call for 'Direct Action' to achieve Pakistan.

The Mountbatten Plan (July 1947): Communal riots raging in Punjab, N.W.F.P., Assam and Bengal at the time Lord Mountbatten replaced Lord Wavell as Governor-General and Viceroy of India. Recognising that denial of partition would intensify the orgy of violence and death, formulated a plan for the simultaneous grant of independence to India and the creation of Pakistan.

India Wins Freedom: After the Plan was accepted, the constitutional formalities completed in London. With passage of the India Independence Act 1947 India became free and Pakistan was created.

1922, on the charge of spreading disaffection against the government. He was sentenced to six years imprisonment.

The Khilafat movement also lost its relevance at this time. The people of Turkey, under Mustafa Kemal Pasha, overthrew their autocratic ruler and declared Turkey to be a secular state. They also abolished 'caliphate', the institution of the 'caliph'. This broke the backbone of the

Khilafat movement. The suspension of *satyagraha* upset Gandhiji's own colleagues. The differences between Gandhites (non-changers) and opponents (pro-changers) became sharper at the Gaya session of 1922. C.R. Doss and Moti Lal Nehru advocated a new line of political activity under changed conditions and formed the Swaraj Party on Jan 1, 1923. It was to function within the Congress with a difference that it would participate in Council elections. The Swarajists contested the elections of November 1923 and did well. Their main aim was to obstruct the government from within.

Communalism raised its head as the non-cooperation movement petered out. The Muslim League and the Hindu Mahasabha (founded in December 1917) became active. A group named "responsivists" including Madan Mohan Malviya, Lala Lajpat Rai and N.C. Kelkar offered cooperation to the government to safeguard Hindu interests. The situation in the country appeared dark. Gandhiji went into retirement as Congress was split, communalism was spreading and there was general political apathy. But India again emerged out of darkness and entered a new era of political struggle when in November 1927, the Simon Commission was announced.

The Montford Reforms had provided for a review of the working of the reforms after ten years. However, keeping in view the situation in the country, the Britishers appointed a commission, consisting of seven British MPs and headed by Sir John Simon, two years in advance. It arrived in India in early 1928 and was boycotted by all shades of Indian political opinion because there was no Indian on the Commission. The Simon Commission recommended that: (a) dyarchy be abolished in provinces and more powers be given to ministers responsible to their legislature; (b) Governor should be granted special powers to overrule ministers; (c) the Government of India should control provincial governments; (d) franchise should be extended to at least 10 to 15% of the population; and (e) communal representation be retained.

About the Central Government, the commission observed that a Federation was impossible in the near future. However, a Council of Greater India, representing both British India and the Indian states, could be established to discuss matters of common interest. Burma was to be separated from India and Sind from Bombay. The Army needed to be Indianised but the British forces were needed till India was fully equipped. Though universally criticised, the Simon Commission had one general effect on Indian politics: it motivated Indians to think seriously about formulating an Indian constitution acceptable to all parties. The Nehru Report was one such attempt, although it could not get the approval of all the parties.

Anti-Simon Commission demonstrations all over India suggested that the country was again ready for a struggle. Gandhiji

(Continued on page 54)

PUNJAB

OF BULLETS AND BALLOT

When PM Rajiv Gandhi and Sant Harchand Singh Longowal signed an accord on Jul 24 it was widely believed that it was the ultimate step towards the restoration of complete harmony and normalcy in the terrorised state of Punjab. It was also secretly feared that the Sant's life would be in grave danger thereafter as he had acted in blatant defiance of all that the extremists stood for.

The fears were not unfounded. For on Aug 20 terrorists struck a crippling blow in an attempt to nullify what had been achieved by the Punjab agreement. They felled the person instrumental in achieving peace for Punjab—Sant Longowal himself. That too immediately after he had finished addressing a congregation of 5,000 odd people at a gurdwara in Sherpur village near Sangrur. Violating the religious sanctity of yet another place of worship.

The untimely death of Sant Longowal, who, within a span of a few months had emerged as the apostle of peace, unity and reconciliation in Punjab could well have unravelled the yarn of Hindu-Sikh amity which Longowal had so painstakingly spun after the signing of the accord. In fact, he had virtually embarked on a door to door campaign imploring Hindus and Sikhs alike to sink their differences and create a congenial atmosphere in Punjab. And even though the Sant had not initially been in favour of conducting elections in the state as early as Sep 22 because "Elections at this stage would generate heat on both sides and this could vitiate the improving atmosphere in the state. The main question is of peace. Elections can be held after the dust finally settles down," he later relented. In the face of the Centre's reasoning that elections were a natural corollary of the accord and that re-establishment of democratic rule would further improve conditions in the state. PM Rajiv Gandhi also held that poll postponement "would have necessitated constitutional amendment for extension of President's rule in the state beyond Oct 6," setting a bad precedent. Keeping this in view Longowal had begun his campaign of explaining the accord to the unlettered rustics of Punjab, promoting Hindu-Sikh unity and the feasibility of the elections.

But the terrorists and anti-nationals had other designs and could go to any extent to jeopardise the chances of restoration of peace in Punjab. With scant regard for both Hindus and Sikhs. The devious ploy to kill Sant Longowal only goes to underscore this fact. And the last rites of the departed leader were not even complete when the internal squabbles among the Akali Dal ranks, rendered virtually leaderless, intensified manifold, threatening to split the party and render the Rajiv—Longowal accord useless. But then common sense prevailed and S.S. Barnala, one of the staunch loyalists of the Longowal clan was elected acting President of the Akali Dal (L) while Ajit Singh Ropar, another strong contender for the post, was appointed chairman of the party's parliamentary board.

Meanwhile, even the death of Longowal could not make the Centre reverse its decision to conduct early polls in Punjab. For postponing of elections at this stage would be tantamount to submitting to the tactics of terrorists. The Punjab poll, the PM maintained, was "the people's answer to brute force employed by a small section to impose their will on the masses." However, the elections were put off by three days to give the people time to perform the last rites of Longowal and will now be held on Sep 25. Of the 2,064 candidates who had filed their nomination papers for the Assembly elections and 173 for the Lok Sabha elections, 848 candidates have been left in the poll fray for the former and 84 for the latter. The elections for the 13 Lok Sabha seats and 115 Assembly seats (two were countermanded owing to the death of an independent candidate Gurdial Saini) will now be held amidst tight security. The contesting candidates now live in constant fear of becoming the targets of terrorists.

However, apart from the massive deployment of security forces in Punjab, the Centre has also taken another step to ensure the safety of candidates. The President has promulgated an Ordinance amending Section 52 of the Representation Of People Act, 1951 whereby the elections will be countermanded only in the case of the death of a candidate set up by a recognised political party. While this will ensure the safety of independent candidates it will also limit the task of security forces to

protect the lives of candidates of recognised political parties.

It is to be hoped that the amendment will prove effective. For terrorists have demonstrated their scant respect for security measures. Recently Congress (I) Metropolitan Councillor Arjun Dass was shot dead in Delhi along with his security guard. As was Dev Dutt Khullar, a senior Congress (I) leader and former member of the local municipal corporation at his Jalandhar residence on the same day that Longowal was assassinated. Punjab is all geared for the polls now. With everyone keeping their fingers crossed in the fervent hope that the battle of the ballot doesn't become one of bullets.

ASSAM

WELCOME ACCORD

I am happy to share with you the news that an accord with the Assam student leaders was signed last night, in fact early this morning at quarter to three." This announcement, part of PM Rajiv Gandhi's maiden Independence Day speech, must undoubtedly have filled the hearts of his compatriots—particularly those belonging to the strife torn northeast—with relief. For, it proclaimed the end of the festering six-year-old bloody anti-immigrant agitation which not only claimed the lives of more than 4,000 innocent people but also rendered at least 3,50,000 people homeless.

What started as a protest against the steady influx of aliens from across the international border, which threatened the numerical majority of the Assamese in their own homeland, soon assumed the form of a full scale agitation with ominous politico-communal overtones. Spear-

TERMS OF SETTLEMENT

The much-awaited accord among the government, the AASU and the AAGSP leaders has been designed to restore numerical majority to the Assamese people and also preserve their cultural, social and linguistic identity and heritage. The main highlights of the accord:

- The selection of Jan 1, 1966 as the base year for detection and deletion of foreigners. Foreigners who entered Assam between this date (inclusive) and Mar 24, 1971 shall be detected in accordance with the provisions of the Foreigners Act 1946 and the Foreigners (tribunal) Order 1964 and their names deleted from the electoral rolls. However, 10 years following the date of detection their franchise will be restored to them. The government has decided to retain the 1967 electoral rolls as the basic document for identification of these foreigners.
- All persons who entered Assam before Jan 1, 1966 including those whose names appeared on the 1967 electoral rolls shall be regularised while all foreigners who entered Assam on or after Mar 25, 1971 shall continue to be detected, deleted and expelled in accordance with the law. Also all expelled persons who have subsequently re-entered Assam illegally will be expelled. Due consideration will also be given to the difficulties expressed by AASU and AAGSP regarding the implementation of the Illegal Migrants Act 1983.
- Constitutional, legislative and administrative safeguards will be provided to protect the cultural, social and linguistic identity and heritage of the Assamese people.
- The government has promised to view sympathetically the cases of disciplinary action and criminal cases (except heinous crimes) filed in the course of the agitation. It has also proposed to raise the upper age limit in public services. A scheme for ex-gratia payment for those killed during the agitation is also being considered.

headed by the All Assam Students' Union (AASU), and the All Assam Gana Sangram Parishad (AAGSP), as early as 1979, the agitators demanded the removal of Bengali speaking immigrants to Bangladesh. In 1980 the then PM Indira Gandhi made a vain attempt to solve the Assam problem. And just when it appeared that some sort of understanding might be reached between the agitation leaders and the Centre, all hopes were dashed when both sides backed out at the last minute due to some misunderstanding over the cut-off year for detection and deportation of immigrants. This setback was to be regretted bitterly by the Centre when the 1983 Assembly elections in

summit in the outbreak of wide-spread communal violence and the shockingly gruesome Nellie massacres which claimed nearly 3,500 lives.

Subsequent efforts by the Centre to resolve the Assam stalemate proved futile, too. And when Rajiv Gandhi became PM he accorded Assam the second topmost priority after Punjab; not that his initial moves were successful. This did not deter him in any way and R.D. Pradhan, Union Home Secretary, was assigned the task of preparing the groundwork for talks between the AASU and AAGSP leaders and the Centre.

Fortunately the diminishing popularity of the agitation leaders in Assam also prompted them to seek a way out. Several rounds of talks with the Centre was evidence of their desire to end the confrontation. But still no satisfactory accord could be reached. The signing of the Punjab agreement on Jul 24 lifted a considerable burden off the PM's shoulders. Thereafter efforts to solve the Assam imbroglio gained considerable momentum, with both Pradhan and the Union Home Minister, S.B. Chavan shuttling between Guwahati and New Delhi to assess the situation, and hold talks. The Centre also indicated its willingness to go to the farthest extent to accommodate the agitation leaders and ensure early elections in Assam. And the deadline for reaching an accord was set for Aug 15.

On Aug 5, the agitation leaders arrived in New Delhi once again for another round of talks with the Centre. Their complaint was that the revision of rolls with 1971 as the cut-off year undertaken by the Election Commission to facilitate elections in the state were not legally valid because they had failed to take into account the abnormal increase in the number of voters in at least 50 of the 126 constituencies. However, when the agitation leaders returned to Guwahati the prospects of a settlement had brightened considerably. To finalise the terms of agreement Chavan went to Guwahati on a day's visit on Aug 8 where he held discussions with CM Hiteswar Saikia and several political parties. And soon after his return the Centre sent invitations to the student leaders summoning them to the negotiating table for the last time. When they arrived in the Capital on Aug 11 they had wide-ranging continuous talks with government officials in which the terms of the accord were thrashed out. PM Rajiv Gandhi, on his one-day visit to Guwahati assured the people that an end to the Assam problem was in sight.

The agitation leaders agreed to have CM Hiteswar Saikia as head of the caretaker government despite the numerous grudges they harboured against him. A long-delayed accord was finally signed (for details see box) in the early hours of India's 38th Independence Day delivering Assam from strife, uncertainty, violence and terror and offering instead peace and security.

SRI LANKA

BACK TO THE WARPATH

Once again the senseless bloodletting has assumed horrific proportions in Sri Lanka. The three-month ceasefire agreement drafted by the Sri Lankan Government on Jun 18 has long since been violated with impunity by the island nation's callous security forces. And the Tamil militants have hit back with swift reprisals.

The second phase of the Thimpu talks scheduled for Aug 12 ended on a dismal note. The Sri Lankan delegation headed by President Jayewardene's brother Hector Jayewardene, on whom the President conferred plenipotentiary powers, put forward a fresh set of proposals and also laid down certain pre-conditions for settlement. The new proposals envisaged giving more powers to police as a step towards devolution of powers to Tamils in the north and eastern provinces. Also, Hector Jayewardene propounded the deeming of district councils in the Tamil-dominated north and east Sri Lanka as provincial councils. The boundary of these councils would be limited to the provinces and the President, in his capacity as head of state, would grant executive powers to whom he thought enjoyed majority in the provincial council. It was a calculated move to nullify the major Tamil demand of amalgamation of the north and eastern provinces. But what perhaps infuriated the Tamil militant leaders the most was Hector Jayewardene's categorical rejection of three of the four cardinal principles spelt out by them viz distinct nationality for the Tamils, traditional homeland for the Tamils, right of self-determination and grant of citizenship rights to Tamils living in Sri Lanka.

Even as the talks at Thimpu were being held violence escalated in the island nation. In Vavuniya an estimated 200 Tamils were massacred in cold blood followed by the killing of about 200 more—comprising mostly women and children in the two villages of Sampanthu and Arankatti—by the Sri Lankan security forces. In Thimpu this genocide of

the Tamils coupled with "the inadequate, unacceptable and three-decade old" government proposals prompted the Tamil guerilla leaders to stage a walkout.

Even India's diplomatic efforts were unsuccessful in resuming the aborted talks. Foreign Secretary Romesh Bhandari's discussions with both sides failed to make either of them give up their unrelenting attitude. Later the Sri Lankan Government indicated its preparedness to discuss the Ceylon Worker's Congress (CWC) proposals placed before the All Party Conference in Colombo in November last, in a bid to pave the way for resumption of talks. These included the provision of separate linguistic regions for the north and eastern provinces and another for the plantation labourers of Indian origin in the central highlands of Sri Lanka. The linguistic regions called regional councils would have powers to enforce law and order. But the overture came too late. For, the Tamil militant leaders who had flown back to Madras, stated that they would agree to resume talks only if the Sri Lankan Government fulfilled certain preconditions, viz to take steps to end state violence and terror against Tamils, adhere to its ceasefire agreement and put forward a set of fresh proposals.

It was then that PM Rajiv Gandhi himself decided to intervene and invited the Tamil leaders for talks in New Delhi. And New Delhi which had been handling the Sri Lankan ethnic issue with admirable tact almost blundered for the first time when it issued deportation orders to three Tamil militant leaders. Presumably under the suspicion that they had tried to prevent the meeting between the Eelam National Liberation Front and the PM. However, the deportation orders against one of them S.C. Chandrasekaran, convener of the PROTEG group (Protection of Tamils of Eelam against Genocide) were later revoked. The deportations incident established the fact that India was not prepared to tolerate hardliners who may jeopardise talks to resolve Sri Lanka's ethnic crisis.

Topmost officials in New Delhi have had intense consultations with Hector Jayewardene during his recent visit to the capital. PM Rajiv Gandhi, too, is keeping in touch with President Jayewardene. Indian authorities are trying to reason with the Tamil militant leaders also. For if the ethnic crisis remains unresolved any longer the worsening state of affairs in Sri Lanka may well culminate in a civil war.

GUJARAT

A TIMELY AGREEMENT

One would have expected that the signing of an accord between the Amarsinh Chaudhary Ministry and the anti-reservationists would be the concluding chapter in Gujarat's tale of woe. But no sooner had the clamour raised by the reservations issue subsided a little than the parallel anti-roster stir acquired additional momentum. Initial rounds of talks between the state government and the striking government and the panchayat employees did nothing to break the stalemate. The Chaudhary Ministry adamantly maintained that the roster system was 'non-negotiable' and issued an ultimatum to the striking employees to rejoin duty or face dismissal. Undaunted by the threat the Gujarat state employees federation on its part issued a call for a Gujarat bandh on Aug 19.

Violence erupted once again. However, last ditch efforts made by the state government finally yielded results and succeeded in averting what could well have been a stir of the same horrifying magnitude as the reservations agitation. On Aug 19 the proposed Gujarat bandh was withdrawn, thanks to the signing of a timely accord between the striking employees and the state government. This ended the 73-day-old anti-roster strike demanding the total abolition of the caste based roster system of promotions.

The highlights of the accord are the introduction of minimum experience rules for promotion as recommended by the Sadhawani Commission, option to fix minimum experience period in consultation with the employees instead of adhering to the set norms of five, seven and eight years recommended by the commission for various categories of promotion. The government also agreed to consider, in retrospect, cases of hardships to upper caste employees who had been by passed by backward class employees in promotion from Mar 24, 1981. Also, the striking employees would be paid wages for the entire strike period: 60% of the strike period would be considered special leave while the decision for the remaining 40% would be left to the CM.

Not that the accord was widely welcomed. On Aug 26 the Gujarat Karamchari Utkarsha Mandal constituting pro-roster employees organised a protest march to press their demand for the scrapping of the agreement between the anti-roster employees and the Gujarat Government. And when they tried to gate crash into the state Assembly build-

ing there was a major confrontation between them and the police. The pro-roster employees have now threatened to stage a ~~years~~ ^{year} ~~roke~~ ^{ro} agitation if their demand is not met. This only goes to show the extent to which lawlessness has spread in the state.

DUTY CONCESSIONS

CLOTHING THE NATION

In a bid to increase the availability of fabrics at reasonable prices to consumers the Centre announced duty concessions amounting to Rs 131 crores. Substantial duty reliefs have been extended to various categories of synthetic fibre and blended yarn coupled with a scheme for production and distribution of low-priced fabrics by units of the National Textile Corporation (NTC). The relief package is designed to lower the prices of synthetic and blended fabrics. These included polyester fibre, polyester cotton, blended yarn, and polyester blended viscose yarn. Excise duty on acrylic fibre has also been reduced to supplement the availability of raw wool for use in the hosiery and knitwear industries.

While formulating the package of concessions the government has laid greater emphasis on lowering the costs of blends popular among the masses. The NTC scheme is expected to increase production of blended shirting and trousers to 80m sq m, in a full year, from their present level of 24m sq m. Of this 80m sq m about 8m sq m will be allotted to public sector undertakings and the Director General of Supply and Distribution (DGS & D). The remaining 64m sq m will be sold in the open market through fair price shops and NTC outlets.

The scheme is expected to bring down the retail price range of shirtings to about Rs 20 per sq m and that of heavier cloth for trousers to about Rs 40 per m. The government will also give the scheme a trial run of six months during which it will be monitored to see whether the benefits are being passed on to the consumers. Says Textile Minister, C.S. Singh: "The programme is basically designed to impart a price discipline over the market and ensure that duty relief is actually passed on to the consumers in full." If this objective is not fulfilled the government will reconsider the concessions.

Of the 134m m of polyester fabric to be produced this year the NTC has been given the responsibility of producing 80m m of cheap cloth. For this polyester fibre will be made available without payment of excise duty as against Rs 45 per kg at present. Countervailing or additional duty of customs on imported fibre will also be abolished. The NTC scheme will be open to mills of the private sector, too, provided they clearly indicate units which function exclusively under this scheme and also carry out the entire process of spinning, weaving, processing and sales in totally supervised arrangements. They would also be required to submit the full cost structure up to retail price to the government and organise retail sales through their own facilities or fair price shops.

Undoubtedly the new scheme will affect the position of cotton in the textile sector and the handloom weavers. But the government is deliberately pursuing such a scheme of encouraging man-made fibres to reduce dependence on the fluctuating supply of cotton. Some important concessions proposed in the scheme include reduction of excise duty on polyester fibre from Rs 45 to Rs 25 a kg, on acrylic fibre from Rs 17.50 to Rs 10 a kg, on polyester cotton blended yarn from Rs 5 to Rs 2 a kg, on polyester Ramie blended yarn from Rs 8 to Rs 4 a kg and on polyester viscose blended yarn from Rs 10 to Rs 4 a kg.

However, in order to cushion the revenue loss of Rs 131 crores excise duty on fabrics costing more than Rs 25 a sq m is being raised by Rs 2 per sq m.

EXPORTS

GROWTH IN A TEA CUP

The recent price fluctuations in the world market have reduced the availability of resources to finance the process of development. And commercial borrowing has become expensive, too. The only alternative left with the government is effective export promotion and import substitution. In a major bid to boost the growth rate of exports, which at present stands at a mediocre 10.6%, and to meet the export target for the current year fixed at Rs 11,736 crores (of which Rs 11,266 crores is for non-oil exports) the government has announced a series of measures.

Notable among these is the decision to assure cash compensatory support (CCS) for eligible items at stipulated rates over a longer time

Credit for sketch on page 19—Courtesy *For Eastern Economic Review*—of Sep 85 issue was inadvertently omitted.

scale. This is particularly helpful for exporters who have been in a bind under the CCS scheme. The government has also decided to provide being observed even though they are no longer available. During the last financial developments over the past three years. The CCS scheme is a measure designed to compensate exporters for elements of deferred taxes.

In addition to this the government has also taken an assurance that fresh initiatives to stimulate the export of consultancy and other services, computer software and handicrafts will also be taken. In fact it proposes to set up a separate export promotion council for computer software and electronics. The Centre has also announced the extension of the international price replenishment scheme (IPRS) to all steel including alloys.

Bonding charges for export oriented units have been reduced by a drastic 40%. The scheme for export obligation for concessional duty on certain items of textile machinery is also to be continued. To boost the export of spices the Centre has decided to provide the Cardamom Board with Rs 10 lakhs to start the auction system.

The government's decision to allow the import of laboratory chemicals for stock and safe purposes is likely to be advantageous for small research establishments with requirements too small for them to import directly from foreign manufacturers.

But, perhaps the most important measure is the abolition of minimum export price (MEP) on tea. Although the country's tea exports have touched a new high this year, what with outputs from Sri Lanka and East Africa falling woefully short of target, the tea prices in the international market have registered a substantial decline. Sri Lanka itself has recorded a 39% fall. Keeping this in view the Centre has decided to do away with the MEP for Indian tea of Rs 26 per kg. While retaining the ceiling of 220m kg. These collective measures should go a long way in removing the inadequacies from the Centre's long term fiscal policy.

LOK PAL BILL

SCATHING CRITICISM

The Lokpal Bill which was introduced in the Lok Sabha, towards the end of its monsoon session, came in for some scathing criticism from the Opposition, so much so that it forced the ruling party to refer it to a joint select committee of both Houses of Parliament. This committee comprising of 30 members of the Lok Sabha and 15 of the Rajya Sabha is expected to submit its report on the first day of the next session.

The Lokpal Bill, the fourth of its kind to have been placed before the Parliament, seeks to provide for inquiry into allegations of corruption and misconduct levelled against a public functionary. And while the term public functionary, as defined by the Bill, includes ministers, ministers of state, deputy ministers and parliamentary secretaries of the Union Government, the present Bill excludes the PM and the CMs from its purview. And the fact that the PM's office has been excluded has been strongly opposed by the Opposition. Apart from this the Opposition has attacked Sec 21 of the Bill which prohibits the publication of information relating to complaints, including the identity of the complainant and the public functionary against whom the complaint has been made.

While similar bills were passed in 1968 and 1971 (called the Lokpal and Lokayukta Bills) and 1977 (the Lokpal Bill), the latest Bill differs from the Janata Government's 1977 Bill in that while the latter empowers the Lokpal to inquire into other grievances, besides allegations of misconduct, against a public functionary, the former empowered the Lokpal to inquire into complaints that a public functionary has committed any offence punishable under Chapter IX of the Indian Penal Code or under Prevention of Corruption Act, 1947.

The Lokpal Bill specifically excludes the President, the Vice President, the PM, the Speaker of the Lok Sabha, the Chief Justice and judges of the Supreme Court, the Comptroller and Auditor General of India, the Chief Election Commissioner and the Chairman and members of the UPSC.

According to provisions of the Bill the President, in consultation with the Chief Justice of the Supreme Court, can appoint a Lokpal for a term of five years. He must be a serving judge or a former judge of the Supreme Court or qualified to be one. For the selection of an impartial and unbiased Lokpal it has been stipulated that he should not be a Member of Parliament or any state legislature or be connected with any political party or carry on any business or profession while serving as Lokpal. Also he cannot be removed from office except by the President's order on the grounds of proved incapacity or misbehaviour. In fact any attempt to hamper the Lokpal's inquiries or bring him disrepute has been deemed cognisable. The Lokpal, on his part, is empowered to

under the provisions of the law by an officer and a security deposit of Rs 1,000. The complaints should relate to offences committed within five years of the launching of the complaint. The offences under Sec 9 of IPC include taking gratification in respect of an official Act, by corrupt and illegal means in order to influence a public servant; disobeying the law or framing an incorrect document intended to cause injury to some person; buying or bidding for property or unlawfully engaging in trade or abetting offences defined under Sec 162 or Sec 163 of the IPC. After he has conducted the inquiry the Lokpal is required to submit his report to the PM who will then inform him of the action proposed to be taken against the offender, within three months.

The Bill also makes adequate provisions to discourage false or frivolous complaints and empowers the Lokpal to punish those whose complaints are held to be false. However, now that the Bill has been referred to a committee its outcome is open to speculation. For, it is well-known that the earlier Lokpal Bills after having been referred to committees got shelved for one reason or another. And, whether the government will pursue the Bill with as much enthusiasm, despite the antagonism it has generated, remains to be seen.

JUDICIAL REFORMS AND JUSTICE FOR ALL

The two-day conference of the Chief Justice of India, chief justices of High Courts, law ministers and chief ministers, in New Delhi, proposed several measures to reform the country's judiciary in order to develop a quicker and effective judicial system. PM Rajiv Gandhi, in his inaugural address, stressed the need to mobilise the large sums of government money blocked in the courts. He also favoured the idea of setting up High Courts for smaller states, especially the north-eastern states and defended the policy of having chief justices from outside the states.

The Chief Justice of India P.N. Bhagwati proposed the setting up of mobile courts in rural areas, appellate labour tribunals, administrative tribunals and service tribunals. A system of non-stipendiary magistrates for petty offences punishable with fine was also suggested by him.

A 17-point resolution was unanimously adopted at the end of the conference in a bid to provide the common man with justice, easily and quickly, and eliminate arrears in all courts within the next five years. For the latter steps include setting up of a working group from amongst Chief Justices and chief ministers which would advise the Judicial Reforms Commission in matters pertaining to reforms in civil and criminal procedure courts. It also reiterated Chief Justice Bhagwati's recommendation of setting up mobile courts in rural areas for which the Parliament would have to pass an appropriate legislation. The resolution also suggested that the institution of the Lok Adalats, which are providing commendable services in settling petty disputes outside the court in the states of Tamil Nadu, Gujarat, Maharashtra and UP, should have a statutory basis and should be included in the National Legal Services law proposed to be passed by Parliament.

It had also been agreed upon that state governments should increase the number of courts and also the strength of judges. In fact the Union Law Minister, Asoke Sen, has decided to fill up the 60 odd vacancies in the Supreme Court and High Courts within the next three months.

The feasibility of the resolutions and recommendations will be studied and the situation will then be reviewed by the participants of the conference next month.

NUCLEAR REACTORS INDIGENISING THE SCENE

India is going about the job of indigenising its nuclear power programme in a big way. On Aug 8, Dhruva, a 100 Mw natural uranium reactor designed, constructed and commissioned by scientists of the Bhabha Atomic Research Centre, went critical. It is likely to become operational by November this year. This indigenously produced reactor, the largest of its kind, is one of the new high flux reactors in the world. The heavy water cooled and moderated uranium reactor is 2.5 times larger than the 25-year-old Canadian built Circus reactor which it will replace.

Even its most intricate components like Calandria and fuelling machine have been manufactured in India. Dhruva is likely to create an impact in the fields of medicine, agriculture and industry as it will help increase the production of isotopes like iodine-131, Chromium-51 and

Molybdenum-99

Meanwhile the 235 Mw second unit of the Madras atomic power plants at Kalpakkam also went critical on Aug 12—another milestone in India's nuclear power programme. The commercial production of power by this unit is expected to start by December this year.

Several new reactors are also in the offing. An indigenously designed fast breeder test reactor at Kalpakkam is expected to become critical by September. This 50Mw reactor will use plutonium-uranium-carbide developed at BARC as fuel. The Maharashtra Atomic Power Plant-II, with a generating capacity of 220 Mw will also become operational by October. The government also proposes to commission the Narora atomic power project by 1986-87 and the Kakrapur atomic project in Gujarat in the Seventh Plan period.

NYERERE'S VISIT STRENGTHENING TIES

The Tanzanian President Julius Nyerere visited India in the last leg of his three Asian nation tour. In an attempt to strengthen the friendly ties between the two countries the wide-ranging talks he had with Indian leaders were focussed on the state of affairs prevailing in South Africa.

The two countries shared a common concern over the situation in South Africa and strongly condemned Pretoria's racist regime. While applauding Tanzania's unstinted championing of the cause of the South African people, India extended unequivocal support to the liberation movements in South Africa. President Botha's unprincipled racist regime's manoeuvres to thwart a peaceful settlement in Namibia, emboldened as it is by the support extended to it by some powerful nations, came in for some scathing criticism. However the Tanzanian President was hopeful that the racist regime would end. Said Nyerere: "The real process of resolution of apartheid in South Africa by force has begun and the black majority is now prepared to die for its rights."

President Nyerere also lashed out at the US, charging it and some developed countries of hijacking the International Monetary Fund (IMF). He said the IMF had become a mere instrument in the hands of the rich north to control the south and that the IMF funds were being misused for destabilising developing countries.

The Tanzanian President also met the visiting Secretary-General of the Commonwealth, S.S. Ramphal, to give him an assessment of the situation in Africa. It is expected that the current turmoil will figure prominently both in the Commonwealth Heads Of Government Meet in the Bahamas, in October, and the non-aligned foreign ministers conference in Luanda in September.

India, on its part, took this opportunity to express its concern over the militarisation of the Indian Ocean which is posing a grave threat to the security of littoral and hinterland states.

President Nyerere, who has led his country for more than 24 years since independence and is now laying down the office of President, also stated that he had come to India at this juncture to reaffirm his country's friendship with India and gave the assurance that relations between the two countries would remain as friendly under his successor, too.

CLAUSEN'S VISIT TAKING STOCK OF THE SITUATION

The visit of the World Bank President, A.W. Clausen, to India, has forced the financial institutions of the country to reassess their standing. And, although Clausen has assured India of an increased flow of concessional credit during the Seventh Plan, he also advised that India should rely more on commercial borrowings than on concessional aid. Clausen also underscored the importance of exports as the most prudent way of meeting the Seventh Plan resources requirements.

However in view of the serious gap in internal and external resources, Clausen's assurance comes as a welcome relief. The World Bank, a soft loan affiliate, the International Development Agency (IDA), will try to give more aid to India and speed up disbursements despite the fact that it is presently facing severe constraints. For, the US and other major donor countries have pledged a lesser amount for the IDA replenishment henceforth curbing the bank's lending ability. For, Clausen says, India should not be penalised for its development success. Further its development experience makes it a strong case for increased emergency or official long-term development assistance.

(Continued on page 55)

NIGERIA

MISSION UNSUCCESSFUL

There was yet another change in Nigeria's government when an obscure army officer, Brig Jere Bogaoro, deposed the 20-month-old military government of Maj Gen Mohammad Buhari in a bloodless coup and set up Maj Gen Ibrahim Babangida, Chief of the Army Staff, as President. Maj Gen Babangida was a member of Maj Gen Buhari's Supreme Military Council, and had also masterminded Buhari's coup in 1983, which had overthrown the civilian government of Alhaji Shenu Shagari, following widespread riots after the 1983 general elections. Opposition elements had then charged Shagari of rigging the elections.

The reason for the present coup, according to Bogaoro, was the 'slow pace of reform' of the Buhari regime, which had failed to overcome the economic difficulties of the people, "as expressed in the media", had been ignored repeatedly. The allegation had some truth because recently Buhari had banned all discussions on the country's political future on the grounds that Nigeria was not ripe for such discussions. Editors and others who had criticised this move had been detained.

However, all African countries do not resort to such radical moves to bring about a change in the leadership. On Aug 15, Tanzania's only official party, Chama Cha Mapinduzi, endorsed the appointment of Ali Hassan Mwinyi as President of Tanzania. Mwinyi had been hand-picked by President Julius Nyerere, who will soon retire after 24 years as the country's leader. There will be a presidential election in October but that is expected to be a mere formality. Mwinyi is likely to uphold Nyerere's policies. His take-over is not expected to generate any radical changes.

SOUTH AFRICA

PROTESTING AGAINST RACISM

Violence in South Africa has intensified since August, and black townships in the Cape Town area have become the main focus of turbulence. The country's black miners took to arms as well and struck at a number of gold mines and collieries. There was a mass march in Cape Town's Pollamor jail where Nelson Mandela, the leader of the African National Congress, is imprisoned. This resulted in violent police repression which evoked criticism even from the US. Since the current unrest began last year, over 600 people have died, making it as bloody an uprising as the 1976-1977 Soweto riots. Meanwhile, the South African economy has been subjected to undue strain as foreign investors have begun to withdraw their money. The rand fell from 45 American cents to a record low of 38 cents, and it was only after the Central Bank intervened that it rose again to 41.5 cents which is still less than half its value two years ago. In fact, the South African Reserve Bank Governor went abroad in August to discuss emergency rescue measures with Western governments.

The European community sent a fact-finding mission to the country, despite Pretoria's attempts to prevent it from setting out. In the US, too, a Bill calling for economic sanctions against South Africa is awaiting passage.

Although Pretoria is under pressure both globally and within the country from its black majority, President Pieter W. Botha made it clear by late August that he had no intentions of committing himself to new reforms on power sharing. He said, "I am not prepared to make it (a commitment), not now and not tomorrow." Instead, he offered, as he had done before, to negotiate with some blacks on limited political change, and these blacks appeared to be hand-picked by him. He offered the blacks no incentives to negotiate and no reason to believe that justice could be attained without further struggle.

One point of concern for black sympathisers is the amount of disunity within the black community. On the one hand is the United Democratic Front (UDF), an umbrella group of 600 multi-racial groups. On the other is the Inkatha, a rival political group. The two are, at present, locked in an increasingly violent struggle

to gain more influence within the black community. This kind of infighting can only lead to a weakening of their struggle against their common enemy—the white minority.

JAPAN AIR DISASTER FATAL FLAW

The worst single plane disaster in aviation history occurred when Japan Air Lines (JAL) Flight 123, from Tokyo to Osaka, crashed into Mount Osutaka in mid-August killing 520 of the 524 people on board. Although the cause of the crash is still uncertain, one theory is that there may have been a flaw in the tube that held the front of the vertical stabiliser to the rest of the plane. If this tube snapped, this could have ripped open the cabin's roof thus causing explosive decompression. Before it crashed, the pilot, with an experience of 12,400 hours of flying time, reported that the apparent cause of the trouble was the breaking of the rear-most right hatch door. Investigation later showed this door to be intact. In fact, all the four survivors of the crash had been seated in the rear of the plane. This crash occurred only 10 days after a Lockheed L-1011 crashed in Dallas, Texas, killing 134 people.

It took rescuers about 15 hours to get to the scene of the crash. One of the survivors said that she had heard several children's voices for hours after the crash before they had gradually faded away. A newspaper later reported that according to the police coroners in the nearby town of Fujioka, some of the victims had been alive for hours after the crash. What actually happened was that the search had to be abandoned on the evening of the crash because of poor visibility, and it was only in the morning that airborne troops could slither down ropes attached to helicopters. The JAL president, Yasumoto Takagai, claimed responsibility for the accident and submitted his resignation to Nakasone.

Although JAL has a first-class reputation for maintenance and on-time performance, its overall safety record is questionable. In 1982, a mentally unstable pilot plunged his DC-8 into Tokyo Bay, killing 24 people. In the last 13 years, four other major crashes have taken place, in Moscow, New Delhi, Kuala Lumpur and Anchorage, and a total of 242 people have died. All of these were blamed on pilot error.

Whatever the cause for the crashes, there is at present a global fear of flying. There is also a demand for seats in the rear of planes since the survivors of the JAL crash were all seated in the back. However, according to airline authorities, there is no logic behind this as surviving a plane crash is mostly a matter of chance.

PAKISTAN

GRAVE ISSUES

The death of Shahnawaz Bhutto, the youngest son of the late PM Zulfikar Ali Bhutto, has set off another round of struggle between the Bhutto family and President Zia-ul-Haq which may have far-reaching consequences. Shahnawaz Bhutto was found dead in his Carnes apartment on Jul 18, and the French police kept his body for post-mortem. According to some sources, death occurred due to poisoning. In Pakistan, meanwhile, hundreds of Pakistanis began to congregate at the Bhutto family burial ground of Garhi Khuda Baksh, 200 miles north-east of Karachi. Thousands of others began to move towards the province of Sind, the stronghold of the Bhutto family and the Pakistan People's Party (PPP).

Zia, however, was taking no chances, his main fear being that the outpouring of sympathy may turn into a major political demonstration. He placed military forces on alert in Sind, barred opposition leaders from entering the province and placed many PPP leaders under house arrest. The major factor behind such measures was that Benazir Bhutto, the late PM's daughter and the present leader of the PPP, decided to attend the funeral ceremony. She had moved to London in 1984 after being released from house arrest, but is still Zia's most formidable political enemy. She was given a tumultuous welcome on her return to Karachi to bury her brother and thousands of people lined the 13-mile route from the airport to her residence. Zia retaliated against this expression of sympathy and support by placing her under house arrest, initially for 90 days.

This came as a surprise to PPP supporters in Pakistan because Gous Ali Shah, the CM of Sind had announced only the day before her arrest that she would be allowed to move freely in the province as long as she did not cause trouble. Benazir Bhutto, on her part, had said that the PPP would not start any agitation against the regime till next January. On Aug 15, June had promised to lift the eight-year-old martial law in Pakistan on Jan 1, 1986. Upon which she had, insisted that she would not create any trouble that would lead to a further postponement of the decision to restore democracy. However, many Pakistanis are skeptical about Zia's intentions. He has planned a series of legislative measures which will prolong his rule under what he calls 'controlled democracy'. He recently proposed an amendment to the 1973 Constitution that will give him the authority to hire and fire all the country's top officials, including the PM. He has also planned a National Security Council, dominated by his own hand-picked generals, which would have the power to overrule any moves by a future civilian government.

SYRIA-LEBANON

CAMPS OF CRUELTY

Fighting broke out again in Beirut in late July and August in which at least 300 people were killed. This time the main perpetrators were the Shias and the Druzes. Nabih Berri of the Shia Amal militia and Walid Jumblatt, the leader of the Druzes, formed a new political organisation with the aim of replacing Lebanon's multi-religious state with a secular democratic nation, which would be pro-Arab and anti-Israel, and would do away with the political privileges of the Christian community in Lebanon. Since the new organisation was set up in Damascus, the Christians assumed that it had Syrian backing. Indeed, Syria did give the Shia Amal militia 50 T-54 tanks in late July, which made them even more irresponsible. Artillery battles which began in Beirut on Aug 9 have continued since then. The Shias also used car bombs to take innocent lives.

Although the Christian Maronite groups have closed ranks and have rejected the Shia-Druze plans, they still do not want to break from Syria. President Gemayel visited Damascus, where President Assad of Syria assured him that Syria was committed to gradual reform and supported Gemayel.

Meanwhile, the Palestinians in Lebanon are still suffering. During the Israeli occupation, hundreds of them were slaughtered in Beirut's refugee camps and the slaughter goes on, their executors are the Shias. It is now revealed that earlier this year Shia gunmen surrounded three shanty Palestinian towns in Beirut, two of them being Sabra and Shatilla, where in September 1982 Maronite Christians were massacred. The Shias tried to expel all Palestinians who were loyal to Yasser Arafat, and when they refused to budge, they tried to bomb them into submission. Almost 18,000 of the camps' 70,000 inhabitants have fled to other parts of Beirut, and 14,000 have moved to Southern Lebanon. Amal gunmen captured about 1,500, most of whom are feared dead. About 638 other Palestinians were killed in the camps. While in 1982 the massacre received widespread coverage, the present carnage has so far gone unreported.

ARAB LEAGUE

MEETING IN VAIN

The 21-member Arab League held its 13th meeting in 40 years in Casablanca. According to some pessimistic observers the disharmony among the members was so apparent that it may well be its last meeting. Only nine of the Arab Heads of State showed up and Syria, Lebanon, South Yemen, Algeria and Libya did not send any representatives at all. The basic division is between the 'constructionist front' and the 'rejectionists'. To the former group belong the more flexible Arab countries who wish to promote the talk-to-Israel formula drawn up by King Hussein of Jordan and the Palestine Liberation Organisation's (PLO) Yasser Arafat. At the last Arab League meeting held at Fez in 1982, it had been decided that peace would be guaranteed for all states, including Israel by implication, in return for the creation of a Palestinian state coupled with Israel's withdrawal from the territory it has occupied since 1967. This year's February accord was meant to create a mechanism to implement the Fez agreement for the setting up of a joint Palestinian-Jordanian delegation which would hold peace talks through US Assistant Secretary of State, Richard Murphy, with Israel. The rejectionists, led by Syria, however, still refuse to think about a compromise with Israel.

In fact, the Casablanca meet made no substantial gains. The Arab League agreed to send emissaries to mediate between several feuding

Arab states, including Syria and Iraq, and to condemn Iran for its role in the five-year long Persian Gulf war. They also conveyed their appreciation of the February agreement. Jordan, however, intends to use this as a go-ahead signal and will constitute a delegation to talk to Murphy.

Meanwhile, Syria, the rejectionist leader, sponsored another kind of summit in Lebanon. Representatives of 15 Lebanese political parties and organisations and about 30 political independents met at Chitaura and declared the formation of a National Alliance Front. The Front declared that it had a "special and distinctive relationship" with Syria and demanded a separation of Lebanon from Israel and "all its agents". It also said that its purpose was to promote changes in the Lebanese system of representation, which at present favours the Maronite Christians.

SOUTH PACIFIC TREATY

SAFETY FIRST

The South Pacific Forum held its annual summit at Rarotonga, the capital of Cook Islands recently, and the main outcome—a South Pacific Nuclear Free Zone Treaty—caused currents among the major nuclear weapons-holding nations. The 13 members of the forum are Australia, the Cook Islands, Fiji, Kiribati, New Zealand, Niue, Papua New Guinea, the Solomon Islands, Tonga, Nauru, Tuvalu, Vanuatu, and Western Samoa. There is also an observer, the Federated States of Micronesia, which is a US administered UN trust territory.

The Nuclear-Free Zone treaty had been first proposed by Australian PM Bob Hawke two years ago. According to its provisions, the manufacture, stationing and testing of nuclear weapons within the zone are banned. However, nuclear powered ships and those carrying nuclear weapons will still be able to ply in the region's waters, although the decision on docking rights has been left to individual members of the forum. Nauru, Papua New Guinea, the Solomon Islands, Tonga and Vanuatu held out, but the other forum members hoped that they would soon agree. Whether the five big nuclear nations, the US, the USSR, China, France and Britain, would accept the treaty is, however, another question.

Most states in the region appear determined to pursue a nuclear free zone in the South Pacific. New Zealand's David Lange is still keen on pursuing legislation that would permanently exclude nuclear ships from New Zealand's waters. France and the US will be most affected by such measures. The forum's treaty provisions would preclude further French underground nuclear testing at the island of Mururoa. The US has long taken the region for granted and its nuclear powered ships have been plying the South Pacific waters. It is now concerned because the Soviet profile has been growing in the region. Recently, Kiribati signed an agreement with USSR giving the Russians permission to fish in their 200-mile coastal zone in return for \$1.5m per year. The Chinese, too, have been establishing their presence. They have set up new embassies in Papua New Guinea, Fiji and Western Samoa. Under the circumstances, the US will have to re-evaluate its strategy for the region.

The forum also discussed the status of the militant Kanak rebels who are now opposing French colonial rule in New Caledonia. The forums communiqué questioned France's plans to upgrade its military bases in the territory, but at the same time, promised the current schedule that calls for regional elections in New Caledonia in September (the date may be changed) and a vote on independence by the end of 1987.

LATIN AMERICA

PRESIDENTIAL PROBLEMS

Two of Latin America's major debtor nations have new Presidents and one of them shocked the world's leading bankers during his inaugural speech. Peru's Alan Garcia declared that henceforth Peru would limit the annual payment on its debt to 10% of his country's export earnings which is between \$300m and \$360 m. Peruvian debt amounts to \$14.1 bn and with this kind of repayment, the world's bankers have something to worry about.

Bolivia's new President, Victor Paz Estenssoro, who was actually the runner-up in the presidential elections held in July. Since neither he, with 26.4% of the votes, nor the winner Hugo Banzer, with 28.6% of the votes, had a clear majority, the election was decided by the Bolivian Congress in August, and here Paz won by 94 votes to 51.

Both the Presidents face serious problems. In Peru, inflation is running out of control, the per capita income has fallen to its lowest level since 1964 and industrial production is rapidly falling. Further, Maoist guerrillas are creating unrest in the Andean highlands and the government is saddled with budget deficits and narcotics related corruption. Inflation in Bolivia is between 8,900% and 34,000%, depending on what

figures the calculation is based on. No payments have been made on its \$3.6b debt in the past 16 months. The black market accounts for three-fourth of the economy. Problems are also being created by trade unions led by leftists.

Both Presidents have unveiled austerity plans. Garcia's plans include a price freeze, a sharp cut in military expenditures and a 12% devaluation of the Peruvian sol. Paz, on the other hand, believes in cutting inflation by holding down state spending, especially by the loss making state tin-mining company. He wants realistic exchange rates, more investment in agriculture and an agreement with the International Monetary Fund (IMF).

Meanwhile, the major bankers of the world are concerned as to whether other Latin American countries would follow the Peruvian example. Nineteen Latin American governments have recently called for a sweeping political "dialogue" with Western creditors to defuse the three-year old debt crisis. To make matters worse, Cuba's President Castro recently told a gathering of representatives from 30 Latin American countries that they should forget about their \$360b debt to Western creditors and not pay it back. However, there is still a silver lining for the Western creditors: Colombia, Venezuela and Ecuador have made considerable progress in meeting their debt obligations and Brazil and Mexico can still receive IMF-sponsored loans and trade credits. Thus, all Latin American borrowers are not in as dire a strait as Bolivia or Peru.

HONG KONG

CHINESE CHECKERS

According to the Hong Kong agreement, reached between China and Britain last September, China promised to keep Hong Kong as it is, for 50 years after Britain hands over the city to China in 1997. However, the people of Hong Kong are already jittery about their future. It was decided to implement some basic laws to safeguard Hong Kong's social and economic freedom when Britain leaves. What is worrying Hong Kong is that these laws are being drafted in China by Chinese experts, and only a few Hong Kongers who have a long record of friendliness towards China are being consulted. Politically, rising stars like Manu Tam and Allen Lee, are nowhere in the picture. Moreover,

Peng Zhen, a member of the Chinese politburo and a socialist law recently stated that the final decision on any point of the basic law should be taken by the Chinese National People's Congress. Under the September agreement, Hong Kong's courts are supposed to have the final word.

Another cause of worry is the Hong Kong Government's own activities. The Attorney General, Michael Thomas proposed some changes in the civil and commercial freedoms, which were all opposed. He proposed that there should be a tribunal to watch over 'objectionable publications'. Although there is no objection to censorship of pornographic material, Hong Kongers felt that China could later use it to curb politically objectionable publications. The proposal is now being reconsidered.

Thomas also proposed that trials of complex commercial crimes were to be heard by a judge and a panel of expert adjudicators. It was felt that this would weaken Hong Kong's legal system. Thomas' third proposal was a 'powers and privileges' Bill, one clause of which would have made it a legal offence to show 'intentional disrespect' to councillors. Already 25 clauses of the 28-clause Bill have been deleted.

Hong Kong's future is also being discussed by the joint liaison group set up under the agreement to discuss trade arrangements and multilateral issues. This group is composed of both British and Chinese members and meets in London. Its work is shrouded in secrecy and this has been criticised by Hong Kongers who want to know which way the wind is blowing. However, there are still 12 years to go before the transfer of power takes place, and much water would have flown down the Yangtze by then.

WEST GERMANY

SPIES IN THE FOLD

In late August, when Hans Joachim Tiedge crossed the border and defected to East Germany, the beginnings of another espionage scandal (see box) became evident in West Germany. Tiedge, an extremely important counter espionage official working on East German affairs, was evidently a Communist spy for the past 19 years and was responsible for exposing East German spies working in West Germany.

Before Tiedge's defection, two secretaries, Sonja Luneburg and

SPY SCANDALS

West Germany has proved to be fertile ground for espionage activities with spy scandals shaking the country with periodic frequency. Among the spy cases to have rocked the country, some notable ones are as follows:

- In 1960, Alfred Frenzel, a Social Democratic Party member specialising in defence matters on the parliamentary committee, who had worked as spy for both East German and the Czech secret service, was arrested. After being given a 15 year prison sentence he was handed over to East Germany in 1966.

- In 1961, Heinz Felle, who played the part of a double agent spying for both West and East Germany, was caught. Felle's espionage activities had future repercussions and ultimately led to the departure from office of Chancellor Konrad Adenauer in 1963.

- In 1974, the sensational spy scandal involving Gunter Guillaume, an East German refugee who had become a close confidant of Chancellor Willy Brandt was exposed. Guillaume who was one of Brandt's most trusted secretaries had an intimate knowledge of many confidential NATO records and also much of Brandt's private correspondence with other world leaders. Guillaume's exposure led to the resignation of Brandt in 1974.

- In 1976, Renate Lutze, secretary to Defence Ministry Personnel Head, her husband Lothar Erwin working as a small official in the Defence Ministry and Jurgen Wiegell, a naval department clerk passed classified and secret information amounting to more than 1,000 documents to East Germany. The Lutze scandal forced Defence Minister George Leber to resign.

- In 1984, Manfred Rotsch, head of the aircraft engineering department of West Germany's largest aircraft manufacturer was arrested for being a KGB spy for the last 17 years.

The basic reason why West Germany is so vulnerable to espionage activities is that identification is easy to conceal for a person moving from East to West Germany as ethnic backgrounds for the two countries are similar as also the common border they share with each other.

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Urges reform—the former working as secretary to the Economic Minister Martin Bengemann and the latter working as a book-keeper in the Association of Exiles, a group dealing with the interests of Germans whose lands had been given to other countries after World War II—also disappeared. Though so far no evidence has surfaced connecting Tiedge and the secretaries disappearance, it is possible that Tiedge tipped them off before crossing the border himself. To complete the mystery, Lorenz Betzing, a West German Armed Forces courier who had also worked on airconditioning installations in a secret government location, also vanished from Bonn. Betzing, it is believed, was a major link in the network of spies operating in Bonn. The recent spy exposure has led to a tightening on security checks in Bonn. Though the Tiedge scandal will not alter West German relations with the NATO countries in any substantial way as these agencies already treat West German intelligence agencies with a little respectful caution, it will certainly affect the process of the normalisation of relations between the two Germanies.

ARGENTINA

TROUBLED TIMES

Recently a tangled tale of espionage and political intrigue surfaced in Argentina. It appears that a right-wing security operative, Raul Guglieminetti, worked his way into the very core of Argentine President Raul Alfonsin's government with the purpose of setting up and leading a network of heavily armed terrorists who would carry out a series of bombings and political kidnappings which would destabilise the civilian government. A police raid on a summer house near Buenos Aires disclosed a right-wing 'death squad', with an arsenal of explosives. The house was owned by Guglieminetti, who shortly afterwards, escaped to Spain. However, the government's inept handling of the matter has led the opponents of Alfonsin to charge that Guglieminetti's group may not have been an anti-Alfonsin group, but one created to spy on political opponents.

Meanwhile, Alfonsin's popularity is on the increase because of his anti-inflationary programme which was announced in June. Inflation had reached 1,010% in May, but things have stabilised somewhat since then. The programme consists mainly of a wage and price freeze. The evidence so far shows that the measures have worked and inflation is coming down. Earlier, the cost of living had risen by about 40% or so a month. In July it rose by 6.2% only. The wholesale price index also fell by 0.9% in July. New money is no longer being put into circulation and this has helped the economy a great deal.

On another front, the trial of the nine former Argentine rulers accused of human rights violation goes on. From 1976 to 1982, these nine generals and admirals were members of the armed forces juntas that governed Argentina, and three of them even served as Presidents. In this period over 9,000 people vanished in the hunt for leftist subversives, and most of them are still missing and are presumed to be dead. Nine hundred people told horror stories before six judges about the treatment meted out to them by the military regime. The judges are expected to give their verdict in December.

THAILAND COUP

THREAT TO TINSULANONDA

Thailand has a long history of coups. Within the past 50 odd years there have been 15 bids for power in this essentially military-dominated oriental nation the latest on Sep. 9. An abortive coup attempt was made to topple the Prem Tinsulanonda Government by a disgruntled former army Colonel, Manoon roopbhachoran and his brother Air Force Squadron Leader Mañas. Swift action by the loyalist troops, however, nipped the uprising in the bud.

The latest coup d'etat, the second during PM Tinsulanonda's tenure, was apparently masterminded by a former Supreme Commander of the armed forces, also an ex-PM of the country Kriangsab Chamanan. The previous one in 1981, dubbed the April Fool's coup, was also led by Roopbhachoran. This time 22 tanks from the 4th Cavalry Regiment and about 400 to 500 troops participated in the rebellion—in the absence of both PM Tinsulanonda who was away on an official visit to Indonesia and the Supreme Commander, Gen Arthit Kamlang-ek.

Far from being bloodless like the earlier uprisings this coup turned out to be a violent 10-hour confrontation between the loyalist troops and the rebel forces. In which, according to official estimates, four people including two Western journalists were killed and 59 injured. The apparent cause of the rebellion was discontent generated by Tinsulanonda's economic policies. It is widely believed that these policies are responsible for the present critical state of the economy, rising

unemployment and under-employment. And Tinsulanonda's decision to devalue the Thai currency, baht, came in for some scathing criticism even from Gen Arthit and would have, in all probability, resulted in a coup had it not been for the support of the royalty which he enjoyed. All, then is not well for the Tinsulanonda Government, which is at the moment rather precariously perched.

USA CHEMICAL CHAOS

August was a bad month for the chemical industry and one of the worst hit companies was again Union Carbide. After the Bhopal gas tragedy last December in India, Union Carbide temporarily closed its Institute, West Virginia plant and spent over \$5m to improve safety regulations and implement a new emergency-warning system. But in mid-August, a leak in a chemical storage tank sent toxic gas into the air over the Institute, and the warning siren sounded about half an hour later. The gas was not methyl isocyanate, and, therefore, the damage was not as serious as at Bhopal. About 134 residents complained of chest problems, nausea and dizziness, but no casualties were reported. However, coming after the Bhopal tragedy, this was another black mark for Union Carbide.

A day after the Institute leak, a cargo of hazardous chemicals collided with a tanker truck on the Capital Beltway near Alexandria, Virginia, and about 7,000 cars were trapped on the road. Six hundred nearby residents had also to be evacuated. At Camden, New Jersey, a forklift in a chemical plant struck a storage tank pipe, spilling 3,000 gallons of highly toxic liquid. In Valentine, Arizona, a freight train carting 30 different types of hazardous chemicals derailed, causing several explosions before the 70-car train was finally destroyed by fire. And at yet another Union Carbide plant in West Virginia, 1,000 gallons of non-toxic liquid was spilt. According to critics of the chemical industry, it had always been a hazardous industry; the only difference is that the public is only now becoming aware of the dangers.

FRANCE

ATTACKING STANCE

On Jul 10, Rainbow Warrior, the flagship of the Greenpeace Ecological Movement, was bombed and sunk, and one crew member was killed. Soon afterwards, French journals like *L'Evenement du Jeudi* and *VSD* began to point their fingers at the French Government. The Greenpeace trawler had been preparing for a voyage to Mururoa atoll, where the French conduct their nuclear tests, to protest against these tests. To prevent that, the navy, it appears had been planning to put marines in fast small boats off the beaches. Even earlier skirmishes had taken place between Greenpeace ships and the French navy.

President Mitterrand, who had insisted, in 1981, on cleaning the French secret service of agents considered undesirable, immediately sent an apologetic letter to the New Zealand Government and called on his to inquire into the event. Bernard Tricot, a former adviser of Giscard-Maule was appointed to head an inquiry commission. But the scandal refused to sink. Another journal, *Le Point*, alleged that the Defence Minister, Charles Henru had ordered a watch on the Greenpeace boat and had insisted that it should be kept out of the nuclear test zone of France, although he had not ordered the bombing. Most people now believe that the DGSE was involved, and the affair may lead to political problems for Mitterrand. The Greenpeace protesters, however, have not been disheartened. They have sent out another ship, *The Greenpeace*, to Mururoa. Mitterrand has warned them that they would be kept out of the 50 mile nuclear test zone by force, if necessary.

Meanwhile, in another development the French Constitutional Council turned down a previously passed Bill on New Caledonia, which divided the territory into four regions, each of which would elect a council whose members would come together in a semi-autonomous congress. The council claimed that the statute was unfair as it favoured the independence-minded Kanaks at the expense of the vast French population in the capital of Noumea. Mitterrand called a special summer session of the Parliament and introduced a new Bill which would increase Noumea's representation from 18 to 21 in a new 48-seat Territorial Congress. The National Assembly in France passed this measure and it has gone to the Senate, which can delay but not block the statute. The New Caledonian Territorial Congress elections which were scheduled for September, are now expected to be held in October.

S.P. S.A.N.

GENERAL KNOWLEDGE

No aid against Aids

It is called AIDS: Acquired Immune Deficiency Syndrome. If that is a mouthful it has other, shorter, frightening names—'Gay Plague' and 'Fear'. The disease is deadly. Its main haunt is the US. But it is inexorably spreading around the world. Dr Ward Cates of the US Centre for Disease Control, warns "the potential for this disease is much worse than anything mankind has seen before." A statement that acquires ominous overtones because cures are nowhere in sight: "Cures are not in the vocabulary." It is the greatest challenge to modern science and medicine, even greater than cancer, and if the increasing count of wasting, waning and dying people, is any indication, the disease seems invincible.

Origins

One had heard of serious sex-linked diseases, like VD's, but there was no disease quite so lethal till the eruption of AIDS in the US some four years back. Nothing is known about the origin of this disease, though some experts claim to have traced its origin to the African green monkey. But since then AIDS hasn't looked back. It has stomped on leaving thousands dead and dying in its morbid trail. So far 73% of those afflicted have been homosexual or bisexual men, 17% intravenous drug users (they shared the needle with AIDS—infected men) and 1% hemophiliacs (they received AIDS infected blood during transfusion). The rest of its victims are normal heterosexual people from common walks of life. How they contracted the disease is, like much else about AIDS, uncertain. The popular theory, however, is that these men contracted AIDS from the prostitutes they visited. Questions regarding its origin and nature continue to haunt doctors and patients alike. Says Dr William Haseltine, a leading investigator at Harvard's Dana Farber Cancer Institute: "In trying to understand AIDS we have moved from being

explorers in a canoe to explorers with a small sail on the vast sea of what we do not know."

Nature

In a normal, healthy person, viruses entering the body are detected by macrophage cells which alert a specialised cell called a T cell. The T cell is the nerve centre of the human body's disease resisting mechanism (immune system). As soon as it is tipped off about the entry of infectious alien bodies it multiplies itself into several helper T cells. The T cells stimulate the B cells to produce antibodies which attack and kill the invaders.

In an AIDS-infected person, the AIDS virus knocks out the T cells blocking their ability to recognise foreign substances, before turning them into AIDS virus factories. The factory is extraordinarily efficient; due to a unique genetic component the virus reproduces itself about thousand times as fast as any other kind of virus. This explains its rapid and rampant growth. Without the infection sensing T cell, the human body is utterly powerless to fight even minor infections. As a result the victim is preyed upon by an endless sequence of diseases. Even mild diseases become fatal, in the face of complete lack of resistance. Some victims develop rare cancers, neurological disorders and brain damage, before succumbing to the inevitable death.

Remedies

Will this marauding disease ever be conquered? The answer is a big question mark. As doctors feverishly grope for possible remedies the patients die by the thousand. So far doctors and experts have failed to pinpoint a single significant chink in the death-dealing armour of the disease. Doctors are baffled and they dread going into room after room of patients asking what they can do, for at the moment there is little they can do.

One idea, which has emerged with relatively greater promise, is to use several drugs in a

combination to battle the disease on many fronts. Drugs like HPA 23, discovered by France's famed Pasteur Institute could be used to block the replication of the AIDS virus by preventing the transcription of its genetic code while others could be used to revitalise the body's own shattered immune system. But it is not so simple. HPA-23 has serious side effects and the 'other' drugs have not been found. And the doctors are nowhere near the stage of comprehending the disease well enough to be able to strike the right combination of drugs. So for the present the forlorn cry of dying patients is likely to remain unanswered.

Non-resident Indians: How many? two million worldwide. Where are they concentrated? The Gulf States. Of the 1m living in them, 2,50,000 are in the United Arab Emirates.

How much do you know?

Even two decades ago Indian women were holding prominent posts in states. Not that many people are aware of this fact. Shanno Devi was the Speaker of the Haryana Assembly way back in 1966. Then in 1972 K.S. Naganathamma was elected Speaker of the Mysore Legislative Assembly. And this year itself Vidya Stokes has been elected Speaker of the Himachal Pradesh Legislative Assembly. The recent signing of an accord between the Centre and Assam to resolve the foreign nationals issue has brought yet another woman into the limelight—Pratibha Parmal Trivedi, Chief Secretary of Assam. Does this make her the first Indian woman to hold the top administrative post in a state? Write in and tell us. Address your replies to: The Editor, Career & Competition Times, 10, Daryaganj, New Delhi-110002.

You Ask. We Answer

What are the famous theories advocated by Dr Jayant Narlikar and Dr Narendra Karmarkar? Explain briefly.

Dr Jayant Narlikar is credited with developing, jointly with the British astronomer Fred Hoyle, a new theory of the universe called the Steady State Theory to explain the present-day universe without postulating a 'Big Bang' origin. According to the Big-Bang Theory, the universe came into being more than 10,000m years ago with a massive explosion of some sort of a 'primordial atom' which contained all the matter in the universe. Ever since, according to the theory, the universe has been expanding in all directions, with the galaxies receding from each other at extremely high speeds. The 'Hoyle-Narlikar theory does away with the postulate of a big bang to explain the origin and expansion of the universe, ample evidence of which now exists. Hoyle and Narlikar postulated that the universe has always been as it is today, and that only the masses of all particles making it up have increased with the age of the universe. This postulate, they said, could explain the observed facts about the expansion of the universe. However, the Hoyle-Narlikar theory is not taken very seriously by cosmologists today, and the Big Bang origin is favoured.

Narendra Karmarkar, the 28-year-old India-born mathematician, now working in the US, shot into fame recently with his discovery of a new 'linear programming algorithm'—a step-by-step procedure that dramatically speeds up the search for solutions of complex problems by a computer. The existing methods for solving such problems are all based on a sequence of instructions known as the

simplex algorithm which is basically a trial-and-error method. For his new algorithm Karmarkar made use of a mathematical process known as 'projective transformation', which makes the process extremely fast especially for highly complex problems.

Please elucidate the following: TELETEX and VIEWOTEX.

TELETEXT and VIEWDATA systems—jointly termed VIDEOTEX—are systems which allow the common household television receiver to become a versatile information display system. In the TELETEXT system the user can pick up on his home TV set, after equipping it with a special decoder, a constant service of news, sports, weather, traffic and business information put out by TV stations in addition to receiving television programmes in the normal way. The information comes in the form of 'pages' which can be selected by the user by punching out its number on a calculator-style keyboard connected to the TV set. The service is generally available free of cost.

The VIEWDATA system is more versatile. It makes use of central computers which can be linked with the home TV receiver through telephone lines. Here too, the information sought appears on the TV screen and can be selected by the viewer, but the range of information available is much larger. In fact, the VIEWDATA user can make use of the almost limitless capacity of the computer. It is even possible to do shopping, plan a holiday trip or transact business from home using the system. But the user has to pay a price for the services.

DATA INTERPRETATION-2

BY M.P. GUPTA

An administrator must have the talent to disseminate complex data by transcribing them into easily understandable graphs and figures. The ICS Main Exams look for this talent in prospective administrators. Here we continue with our series on data interpretation to help you acquire this knack.

Problem-1

The following is the age distribution of 2,000 persons working in a large textile mill:

Age-group	No. of persons
15 but less than 20	80
20 but less than 25	250
25 but less than 30	300
30 but less than 35	325
35 but less than 40	287
40 but less than 45	220
45 but less than 50	268
50 but less than 55	150
55 but less than 60	75
60 but less than 65	25
65 but less than 70	20

Because of heavy losses the management decides to bring down the strength to 40% of the present number according to the following scheme:

- To retrench the first 10% from the lower group
- To absorb the next 40% in the other branches
- To make 10% from the highest age-group retire prematurely

What will be the age limits of the persons retained in the mill and of those transferred to other branches? Also calculate the average age of those retained.

Interpretation

- The number of persons to be retrenched from the lower group is equal to $2000 \times \frac{10}{100} = 200$. Eighty of these will be from the 15-20 age-group and the rest $(200-80) = 120$ from 20-25 age-group.
- The persons to be absorbed in other branches = $2000 \times \frac{40}{100} = 800$. They belong to the following age-group:

Age-group	No. of persons
20-25	$(250-120) = 130$
25-30	300
30-35	325
35-40	45*

* 45 is calculated thus: Total number is 800. In between 20-25 and less than 35 = $130 + 300 + 325 = 755$. Therefore the balance from the age-group: 35-40 is equal to $800-755 = 45$.

Those who are to retire are $2000 \times \frac{10}{100} = 200$ in all and they belong to the highest age-group. Their age-groups are:

Age-group	No. of persons
65-70	20
60-65	25

In our Sep '85 issue M.P. Gupta's name was inadvertently printed as M.N. Gupta. The error is regretted.

55-60	75
50-55	80**
Total	200

** $200-120 = 80$

Hence the age limits of those who are retained in the mill are:

Age-group	No. of persons
35-40	242
40-45	220
45-50	268
50-55	70
Total	800

Calculation of average age of those retained

Age-group	No. of persons (f)	Mid-point*** X	fX
35-40	242	37.5	9075
40-45	220	42.5	9350
45-50	268	47.5	12730
50-55	70	52.5	3675
N = 800		Total =	34,830

***Mid-points are calculated by taking the average of lower limit and upper limit, i.e.

$$\frac{\text{Lower limit} + \text{Upper limit}}{2}$$

For example, in the age-group 35-40, the lower limit is 35 and the upper limit 40. Therefore, the average or mid-point will be $\frac{35+40}{2} = 37.5$. Similar calculations can be done for other groups too.

$$\text{Therefore, average age} = \frac{\sum fX}{N} = \frac{34,830}{800} = 43.5375 \text{ years.}$$

Where \sum = Sum of

$$N = \sum f = 800$$

$$\sum fX = 34,830$$

Problem-2

The number of fully formed apples on 100 plants were counted with the following results:

2 plants had 0 apple	8 plants had 6 apples
5 plants had 1 apple	6 plants had 7 apples
7 plants had 2 apples	4 plants had 8 apples
11 plants had 3 apples	24 plants had 9 apples
18 plants had 4 apples	3 plants had 10 apples
12 plants had 5 apples	

- How many apples are there in all?
- What was the average number of apples per plant?

Interpretation**1. Calculation of total number of apples**

Apples	Plants	Total no. of apples (Apples x Plants)
0	2	0
1	5	5
2	7	14
3	11	33
4	18	72
5	12	60
6	8	48
7	6	42
8	4	32
9	24	216
10	3	30
	100	552

Therefore, total number of apples = 552

2. Average number of apples

Total number of apples in all = $\frac{552}{100}$: 5.52 or 6 approx.

Problem-3

In 500 small-scale industrial units the return on the investment ranged from 0 to 30%, no unit sustaining any loss. Five per cent of the industrial units had returns ranging from 0% to and including 5%. Fifteen per cent of the units earned returns exceeding 5% but not exceeding 10%. The median rate of return was 15% and the upper quartile 20%. The uppermost level of return exceeding 25% was earned by 50 units.

Present the information in the form of a frequency table with intervals of 5% as follows:

Exceeding 0% but not exceeding 5%
 Exceeding 5% but not exceeding 10%
 Exceeding 10% but not exceeding 15%
 Exceeding 15% but not exceeding 20%
 Exceeding 20% but not exceeding 25%
 Exceeding 25% but not exceeding 30%

Use $N/4$, $\frac{2N}{4}$, $\frac{3N}{4}$ as the ranks of the lower, middle and upper quartiles respectively.

Find out the average rate of return.

Interpretation

In the present problem, terms like median, upper quartile, etc are being used. Median is a value at the centre. Therefore, median covers, 50% of the units. Similarly, lower quartile covers 25% of the unit i.e. $100 \times \frac{1}{4}$. Upto upper quartile, the number of units covered should be 75%, i.e., $\frac{3}{4} \times 100$. Therefore, the given information can be summarised as:

(Showing the distribution of small-scale industrial units according to the rate of return on investment)

Table

Rate of return on investment (in percentages)	Firms % of total	Number of firms
Exceeding 0 but not exceeding 5	5	$\frac{5}{100} \times 500 = 25$
Exceeding 5 but not exceeding 10	15	$\frac{15}{100} \times 500 = 75$
Exceeding 10 but not exceeding 15	30	$\frac{30}{100} \times 500 = 150$

Exceeding 15 but not exceeding 20 $\frac{25}{100} \times 500 = 125$

Exceeding 20 but not exceeding 25 $\frac{15}{100} \times 500 = 75$

Exceeding 25 but not exceeding 30 $\frac{10}{100} \times 500 = 50$

Total 100 500

Notes on calculation

(a) In the problem, the median rate of return is 15%. This means the value of median should lie in the median group, i.e., 10-15, because in this group it is composed of exceeding 10 but not exceeding 15%. With the result, exact 15% should be covered by this group. Moreover, upto this group, the number of firms should be 250 or 50%. As before this we have already covered 5% in the first group and 15% in the second group, in this group there will be $50 - (5 + 15) = 30\%$ of the firms, i.e., $500 \times \frac{30}{100} = 150$.

(b) The upper quartile rate of return was 20%. Therefore, this is clear that upper quartile will lie in the group exceeding 15% but not exceeding 30%. Moreover, upto this group, the percentage of the firms will be $\frac{3}{4} \times 100 = 75$ or $500 \times \frac{3}{4} = 375$. Therefore, in this group exceeding 15 but not exceeding 20%, the percentage of firms will be $75\% - (5\% + 15\% + 30\%) = 25\%$ or $\frac{25}{100} \times 500 = 125$.

(c) In this group, the balance number of firms will be kept, i.e., $100 - (5 + 15 + 30 + 25 + 10)$ is equal to 15% or $\frac{15}{100} \times 500 = 75$.

(d) The upper most level of return on investment is exceeding 25 but not exceeding 30. In this group, number of firms are 50, i.e., $\frac{50}{500} \times 100 = 10\%$.

Calculation of average rate of return on investment

Rate of return on investment %	Number of firms <i>f</i>	Mid-points <i>X</i>	<i>fx</i>
0-5	25	2.5	62.5
5-10	75	7.5	562.5
10-15	150	12.5	1875.0
15-20	125	17.5	2187.5
20-25	75	22.5	1687.5
25-30	50	27.5	1375.0
N = 500			$\Sigma fx = 7750.0$

Average rate of return = $\frac{\Sigma fx}{N} = \frac{7750}{500} = 15.5\%$

Hence, the average rate of return on investment is 15.5%.

Problem-4

The seasonal index for a particular consumer good for January is 112.87. Actual demand for January 1981 was 1,265 units. Based on just this information, what would be the estimate of sales in 1981?

Interpretation

January, in general, represents a month in which demand is 112.87% above an average month. Average monthly demand based on 1,265 units in January is:

$$\frac{1265}{112.87} \times 100 = 1120.76 \text{ units}$$

From the information provided, the estimated total yearly sales
 (Continued on page 68)

Bring together the ability to think logically under stress, a mathematical bent, capacity for consistent hard work, a sound knowledge of written and spoken English and you're ready

TO MANAGE MANAGEMENT

Based on interviews with IIM Ahmedabad students
BY VIJAY KONWAR

Management—the prominent word in the career plans of an increasing number of Indian youth. For, it means a future that is highly lucrative, immensely challenging and glamorous. However, nothing succeeds like success in the competitive world of management. One must, therefore, endeavour to develop those qualities which can be said to be the absolute essentials for success.

A high voltage logical mind is one of them. Right from the word 'go', management demands a tremendous capacity for logical reasoning under stress. After all, a manager cannot afford to vacillate. He must make quick decisions, sometimes under terrible pressure. No wonder the CAT (Common Admission Test for the IIMs) itself is so designed as to enable the management institutions to weed out people who are a bit slow on the uptake. The written test, for instance, evaluates not only the standard of reasoning ability but also the degree of efficient time-management. Mental exhaustion, therefore, becomes a major obstacle. Unless one is able to think logically under duress, it will not be possible to surmount it. Similarly, in the group discussion and interview, the emphasis is not so much on knowledge as on the ability to apply that knowledge to simple everyday situations. Why does a scooter consume more petrol going straight up a hill than when it climbs the hill by going round it? This is one example.

Once access to a reputed institute is gained, the candidate finds that the battle, in fact, has just begun. After all, the very purpose of the institutes is to train the 'disciples' of management to think logically and fast and judiciously use basic analytical tools in the decision-making process. One method they employ to drill logic into them is through teaching a deceptively simple principle. Before making any decision, the manager must, first of all, identify the problem. Then he must clearly set out the objectives. After listing a series of alternatives, he must decide upon the most suitable alternative, keeping in mind the objectives, and then take action. One of the first-year students remarked, "If this principle had been as simple as it looks, it would not have been so difficult to

actualise it, when confronted with vexatious management issues." Asked to comment on this aspect, a second year student said, "One feels so inadequate in the beginning. Having for so long been part of a system where rote-learning is given top honours, it becomes difficult to bring one's reasoning abilities to the fore." From all accounts, it appears that students from the humanities background find the rigours of management education a refreshing change.

Be that as it may, it is an undeniable fact that management is for those minds which are attuned to summoning at any given time the powers of logic and reason. This should not, however, be misconstrued to mean that students of only certain disciplines can go in for management. For the simple reason that the ability to reason logically under stress, though it cannot be created, can certainly be developed and enhanced to the point of becoming what is euphemistically called a 'sharp-edged sword', regardless of one's discipline. Practice is the key-word here. The experience of a second-year student should explain the point. This girl realised about two years before facing the CAT that she was rather slow. Baron and Gruber* came to her rescue. She practised the guides thoroughly. The result was worth the effort and time spent—"They (the guides) taught me how to think fast, but, I suppose, regularity played an equally important role.

The extensive and intensive use of Maths in making management decisions is a natural corollary of the need for high calibre reasoning abilities. One cannot hope to get past the CAT (written) without a powerful aptitude for this branch of knowledge. **Tackling the management courses with any credible degree of success involves the use of Maths to an extent that baffles even students with a technical background.** Said a first-year student, "It is amazing how in almost every course that I have done till now, arithmetical, algebraic and geometrical formulae are invoked to find solutions to the smallest of management problems." Instinct and subjective wisdom are not frowned upon. But they come much later.

*Authors of How to... GRE and GMAT books.

after all the combinations have been reduced to simple equations. An ex-student working with the Bank of America emphatically asserted, "It is absolutely pointless going in for management without a strong mathematical base."

How does one go about acquiring this knack? By picking up a good higher secondary level textbook and mastering its contents. For thorough grounding in the basics is more than enough. A topper from Banaras Hindu University in Electrical Engineering, who made it this year in his second attempt, feels he was unsuccessful the first time because he had lost touch with the basics. "Carefully worded questions can easily deceive a person, unless he is familiar with the fundamentals," said this talented B.E.

The third absolute essential for success is capacity for consistent hard work. Hoping to become a manager without being prepared to drive oneself would be sheer idealism. Stunned by the work load, the girl from second year said, "They are sadists, bent on driving us like oxen. But I suppose it is worth the suffering. After all, we might have to work much harder after we get out of this place."

These absolute essentials for success notwithstanding, **a sound knowledge of written and spoken English can be said to be a must.** However much one might like to think that English is dispensable, it is very much an integral part of the management ethos. One of the students interviewed went to the extent of saying, "English can make a big difference between success and failure in the entrance exam, between prominence and obscurity as a management student and between a smart, impressive manager and a dull, boring manager." It is not difficult to appreciate this comment.

In the admission test itself, clearing the written 'hurdle' would become impossible without a comfortable familiarity with the basics of grammar, comprehension and an extensive vocabulary. For a whole section in the paper is devoted to these. Said one second-year rank holder—"The questions are designed to test not only the candidate's proficiency in English but also his ability to think logically and fast. If his English is poor, far from being able to reason logically, he will find it difficult to understand the questions themselves."

In the group discussion, the candidate must be able to demonstrate his reasoning ability through simple and lucid expression. Without this power, a logical mind will definitely go unnoticed. Similarly, in the interview, a thorough grounding in the fundamentals of one's subject(s) of specialisation and coherent expression can indeed be a dynamite combination.

Studying management itself requires a
(Continued on page 66)

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HOW TO TACKLE CAT-2

BY EDGAR THORPE

Mastering a business management course is something indeed. But getting past the tough CAT that guards the IIM doors is even more remarkable. Last month we exposed its verbal and quantitative abilities. Now arm yourself with its comprehension and mathematical abilities.

All management entrance exams, including the Common Admission Test (CAT) conducted by the Indian Institutes of Management (IIMs) are designed with the aim to test the candidate's general, verbal, mathematical and analytical abilities under stress. Success in these tests, therefore, calls for intense preparation which ought to be done intelligently, systematically and thorough-

ly. Obviously those who are quick to use their common sense and logical reasoning abilities, will take the cake.

In *How To Tackle CAT-1* (Sep '85), we dealt with Sections 1 & 2 of the CAT paper, viz. Verbal Ability and Quantitative Ability. Now we will deal with Sections 3 & 4 of CAT, viz. Reading Comprehension and Quantitative Aptitude (Mathematical Ability).



READING COMPREHENSION

Section 3 of the CAT paper consists of verbal ability tests based on questions on reading comprehension and basic grammar in which three long passages followed by 20-25 questions are to be answered in 20-25 minutes. Two questions on sequential rearrangement of sentences are sometimes asked, to be answered in one minute. Five questions on rewriting of incorrect sentences are to be cleared in 10

minutes.

While preparing for this section, we suggest you look up our earlier issues for *Basics Of English-1* (Jan '85), *Basics Of English-2* (Feb '85), *Understanding Comprehension-1* (Mar '85), *Understanding Comprehension-2* (Apr '85), and *Understanding Comprehension-3* (May '85). These articles should prove very helpful in answering the questions on comprehension and grammar.

averages, rates of interest, time and work problems, ratio and proportions, problems etc.

Table-I
Percentage Calculations

%	Means	Formula	Example
10%	10 parts	+ by 10	10% of 200 = 20
20%	5 parts	+ by 5	20% of 200 = 40
25%	4 parts	+ by 4	25% of 200 = 50
33½%	3 parts	+ by 3	33½% of 200 = 67
50%	2 parts	+ by 2	50% of 200 = 100

MATHEMATICAL ABILITY

Section 4 of the CAT paper deals with problems solving situations in Arithmetic, Algebra and Geometry. The intention is to judge the candidate's mathematical ability under stress (time constraint). The standard required is that of plus 2 or any high school level. After school most of the students give up Maths and opt for other disciplines at the graduate level. Hence, they all lose touch with Maths.

This section has been specially prepared to help students (a) to brush up their knowledge of the fundamental principles of Arithmetic, Algebra and Geometry, (b) to acquaint them with the type and format of questions which are generally set in competitive exams, and (c) to provide them with some useful hints for solving mathematical problems and formula for purposes of quick calculations.

Hints

- Do not compute too much. Learn oral calculation techniques (see Tables I, II or III) as most of the questions in such exams require less computation. Roughly correct answers are acceptable.
- Use short-cut methods for quick calculations. Learn quick calculation techniques for the four basic operations on numbers, i.e., multiplication, division, subtraction and addition.
- Leave out difficult questions. Since all questions carry equal marks, do not spend too much time on one question. After answering all the questions, attempt the questions that were difficult.
- Focus on what you need to answer. Do not start attempting the question until you have read it carefully and understood what has been asked.
- Know the basic formula and procedures of calculating percentages.

Table-II
Sum X Times Calculations

Expression	Means	Example
Doubling of a sum	100%	Rs 2 becoming 4
Sum becoming 3 times	200% increase	Rs 2 becoming 6
Sum becoming 4 times	300% increase	Rs 2 becoming 8
Sum becoming 5 times	400% increase	Rs 2 becoming 10

Table III Quick Calculation Techniques

By	Multiplication	Division
10	Add one zero	Add decimal point one place to the left
100	Add two zeros	Add decimal point two places to the left
1,000	Add three zeros	Add decimal point three places to the left
Examples		
	$158 \times 10 = 1,580$	$158 \div 10 = 15.8$
	$158 \times 100 = 15,800$	$158 \div 100 = 1.58$
	$158 \times 1,000 = 158,000$	$158 \div 1,000 = 0.158$
5	Add 1 zero and divide by 2 Example $2268 \times 5 = \frac{22680}{2} = 1,1340$	Multiply by 2 and divide by 10 $2268 \div 5 = \frac{2268 \times 2}{10} = 453.6$
25	Add 2 zeros and divide by 4 Example $2268 \times 25 = \frac{226800}{4} = 56,700$	Multiply by 4 and divide by 100 $2268 \div 25 = \frac{2268 \times 4}{100} = 90.72$
125	Add 3 zeros and divide by 8 Example $268 \times 125 = \frac{268000}{8} = 33,500$	Multiply by 8 and divide by 1,000 $2268 \div 125 = \frac{2268 \times 8}{1,000} = 18.14$

NOTE: For figures like 20, 200, 3,000 or 4,000, etc., multiply or divide by 2, 3 or 4 (as the case may be) and move zero/decimal points.

Percentage Problems

Percentage is a form of expressing a fraction. Note the following hints for quickly solving percentage problems.

- (1) In % problems, three elements are involved, viz:
 - (a) R (rate) followed by a % sign
 - (b) B (base) followed by "OF"
 - (c) P (amount of %) which is generally followed by "IS"

Illustration

Find 25 % of 200.

$$R = 25$$

$$B = 200$$

$$P = R \times B, \text{ hence } P = 25\% \times 200$$

$$= 0.25 \times 200$$

$$= 50 \text{ or } 25\% \text{ of } 200 = 50$$

- (2) In percentage problems the whole is 100%. If a problem involves 18% of base, the rest of the quantity (qty)/amount (amt) = 82%. If R increases, the new amount/quantity is to be added to the base, e.g. 10% increase



= 10% of the base. Similarly if R reduces, the quantity has to be reduced from the base, e.g. 20% decrease = $100 - 20 = 80\%$.

- (3) Percentage change (increase or decrease) has to be calculated using the following formulae:

$$\text{Increase} = \frac{(\text{new amt}/\text{qty}) - (\text{old amt}/\text{qty})}{(\text{old qty}/\text{amt})} \times 100$$

$$= \% \text{ change}$$

$$\text{Decrease} = \frac{(\text{old qty}/\text{amt}) - (\text{new qty}/\text{amt})}{(\text{old qty}/\text{amt})} \times 100$$

$$= \% \text{ change}$$

If the new quantity/amount is less than the old quantity/amount, the figure on the top becomes a negative number resulting in percentage decrease. If the new quantity/amount is more than the old quantity/amount the percentage change is positive resulting in percentage increase.

The percentage increase/decrease is obtained by placing the increase/decrease over the old quantity and changing this fraction to a percentage by multiplying by 100.

Example

If population increases from 300m to 400m in a year, calculate the percentage increase.

$$\text{Increase} = 100\text{m}$$

- For conversion of a % into a decimal, move decimal point two spaces to the left, e.g. $40\% = 0.40$

- For conversion of a decimal figure into %, move the decimal point two places to the right, e.g. $0.158 = 15.8\%$

OR

- To convert a decimal to a %, multiply by 100 and add % sign:

$$0.42 = 42\%, 0.047 = 4.7\%$$

$$8.00 = 800\%$$

- To convert a % to a decimal, remove % sign and move decimal point two places to the left:

$$38\% = 0.38, 5.6\% = 0.056, 210\% = 2.10$$

- To convert a fraction into %, divide the numerator by the denominator and change the decimal point to a %, e.g.

Convert $7/8$ to a %

Divide 7 by 8 = 0.87 and 4, i.e.

$$4/8 = 1/2 = 0.875 = 87.5\%$$

Interest Calculation

For easy and quick calculation of interest problems, note the following points:

- (a) The first day is excluded while calculating interest between the two given dates.

- (b) Year = 365 days or 12 months

- (c) Month = 30 days (unless a particular month is specified)

Simple Interest

Interest calculation involves

P = Principal amount

r = Rate of interest

t = Time (p.a. = 365 days or 23 months or part thereof like half yearly/quarterly, etc.)

Formulae:

$$(a) P = \frac{I}{rt} \quad (b) r = \frac{I}{Pt}$$

$$(c) t = \frac{I}{Pr} \quad (d) I = P \times t \times r$$

Illustrations

1. Calculate interest for 9 months @ 6 % on Rs 10,000

$$t = 9 \text{ months} = 3/4 \text{ of a year}$$

$$r = 6\% = 3/50$$

$$I = P \times t \times r = 1,000 \times 3/4 \times 3/50 = 50 \times 9 = \text{Rs } 450$$

(Note: When t is not specified, it is always assumed per annum period for calculation of interest. In the above example 6% = 6% p.a.)

2. If Rs 5,000 fetches Rs 300 as interest in two years, calculate rate of interest?
 Rs 300 interest in 2 years = 150 per year

$$150/5,000 = 0.03 = 3\%$$

3. An amount of money fetches an

interest of Rs 180 in $1\frac{1}{2}$ years @ 6%.
calculate the Principal amount
invested?

$$r = 6\% = 6/100$$

$$t = \frac{1}{2} \text{ year} = 1\frac{1}{2} \text{ years} = 3/2 \text{ year}$$

$$6/100 \times 3/2 = 9/100$$

$$180 \div 9/100 = 180 \times 100/9 = \text{Rs } 2000$$

Compound Interest

Compound interest = interest earned during one year is added to the amount (Principal amount = P) at the end of each year. Therefore

(a) Calculate I as for simple interest problems using the period of compounding for the time.

(b) Adding of I to P (Interest + Principal = new P)

(c) Calculation of I on the new principal, i.e., I + P of 1st year.

(d) Adding the new I to form new P again. Continue the process for all periods (t) involved in the questions.

(e) Subtract original P (first P) from the final P to arrive at the compound interest.

Illustration

Calculate compound interest on Rs 6000, compounded quarterly at 6% for 9 months.

$$P = \text{Rs } 6000, r = 6\% = 6/100$$

$$t = \text{quarterly} = 3/12 = 1/4 \text{ year}$$

For $t = 9$ months, I will have to be compounded 3 times.

$$1\text{st quarter : } I = 6000 \times 6/100 \times 1/4 = \text{Rs } 90 \text{ (a) = Rs } 6090$$

$$2\text{nd quarter : } I = 6090 \times 6/100 \times 1/4 = \text{Rs } 90.135 = 90.14 \text{ (b) = } 6090.14$$

$$\text{Rs } 6090 + 90.14 = 6180.14 \text{ (final Principal)}$$

$$3\text{rd quarter : } I = 6180.14 \times 6/100 \times 1/4 = 90.27 \text{ (c)}$$

$$\text{Total Interest} = a + b + c = \text{Rs } 90 + 90.14 + 90.27.$$

$$\text{Compounded Interest} = \text{Rs } 270.41$$

Profit & Loss

Terms

SP = Selling Price, CP = Cost Price

p = Profit, l = Loss

Formulae

$$(i) SP = CP + p \quad (iii) p = SP - CP$$

$$(ii) SP = CP - l \quad (iv) l = CP - SP$$

Illustrations

1. If a book costs Rs 5 and is sold at a profit of Rs 3, what is the selling price?

$$CP = 5 \text{ and } p = 3$$

$$SP = CP (\text{Rs } 5) + p (\text{Rs } 3) = \text{Rs } 8$$

2. A bottle of beer costs Rs 6 and is sold at a loss of Rs 2.40. Calculate the selling price.

$$SP = CP (\text{Rs } 6) - l (\text{Rs } 2.40) = \text{Rs } 3.60$$

3. You buy mangoes @ Rs 6 per kg and sell them at Rs 8 per kg. Calculate the profit.

$$P = SP (\text{Rs } 8) - CP (\text{Rs } 6) = \text{Rs } 2$$

4. You purchase rice @ Rs 10 per kg and sell @ Rs 7.50 per kg. Calculate the loss.

$$l = CP (\text{Rs } 10) - SP (\text{Rs } 7.50) = \text{Rs } 2.50$$

In questions based on percentages of selling price/cost price/loss and profit, note the following:

(a) SP : if p or l is expressed in %, multiply CP by % p or l (as the case may be). Add this product to CP if p is involved or subtract if l is involved.

(b) CP : If SP and % p or l is based on SP. Multiply SP by % of p or l to calculate p or l in terms of money. Subtract the product SP if p is involved and add if l is involved.

(c) CP : If % p or % l is based on CP. Find p or l. Divide p or l by CP and change into %.

(d) %p / %l These are based on SP. Find p or l in terms of money. Divide p or l by SP and change into %.

(e) CP : SP and % p is based on CP. Find the relation between SP and CP, then calculate CP.

(f) SP : p is based on SP. Find the relation between SP and CP and then calculate SP.

Illustrations

1. If a book costing Rs 5 is sold at a loss of 5% of the cost price, what is the selling price?

$$5\% \text{ of Rs } 5 = 0.05 \times 5 = 0.25 = 1$$

$$5 - 0.25 = 4.75$$

$$SP = \text{Rs } 4.75$$

2. If mangoes are sold @ Rs 16 per kg and profit is 10% of selling price, what is CP?

$$10\% \text{ of } 16 = 0.10 \times 16 = 1.60 \text{ profit (p)}$$

$$\text{Rs } 16 - \text{Rs } 1.60 = \text{Rs } 14.40 = \text{CP}$$

3. What is % profit based on CP of an article which is Rs 2.50 per kg and selling price of Rs 3 per kg?

$$SP (\text{Rs } 3) - CP (\text{Rs } 2.50) = p : \text{Rs } 0.50$$

$$\text{Rs } 2.50 \text{ } 0.50 = 250 \text{ } 50. = 0.20 = 20\%$$

4. If you buy apple @ Rs 27 per 5 kg and dispose them of at a profit of 10% of the selling price, work out the selling price?

$$CP (\text{Rs } 27) + p = SP$$

If p is 10% of SP, the CP must be 90 % of the SP. Hence:

$$27.00 = 90\% \text{ of the SP, convert it in decimal figure} = 0.90 \text{ of the SP}$$

$$SP = 27 \div 0.90 = 30 = \text{Rs } 30 \text{ SP for } 5 \text{ kg apple}$$

To sum up, consider the following example:

$$\text{Cost price} = 100 \text{ (CP)}$$

$$\text{Profit} = 10\% \text{ (p)}$$

$$\text{Selling price} = \text{Rs } 110 \text{ (SP)}$$

Fraction of the SP is 10 in above example, i.e. 10/110. Hence p on CP = 10%

$$P \text{ on SP} = 10/110 \times 100 = 9.1\%$$

Trade Discount

Discount is mostly represented by per-

centage and means that part which is to be deducted from the basic or list price. It involves:

(a) List price (basic price) = BP

(b) Discount (% reduction given on list price) = d

(c) Selling Price (SP) = BP - d

To calculate SP when the basic price and discount are given use the following formula:-

Consider BP as 100% and "d" is 5%.

$$SP = BP - d = 100\% - 5\% = 95\% \text{ of basic price}$$

Illustrations

If cost of a towel is Rs 20 per piece as per official price list of DCM and 5% seasonal discount is allowed what is the SP of each piece?

$$100\% - 5\% = 95\% = SP$$

$$95\% \text{ of Rs } 20 = 0.95 \times \text{Rs } 20 = \text{Rs } 19.$$

Ratio And Proportion

Ratio: This is a relation which one quantity bears to another with respect to magnitude, the comparison being made by considering what multiple or what part is one quantity to another. Ratio can be found of only two like quantities. In case of difference in units, we first have to convert them into the same unit in order to calculate the ratio between them. It is expressed by putting two dots (:) between quantities written in a simple fraction form. For example:

$$\text{Ratio of } a \text{ and } b = \frac{a}{b} \text{ (or } a \div b) \text{ and denoted by } a:b$$

Formulae

To simplify the ratio of two terms containing fractions, decimals or percentage:

(a) divide the first term by the second

(b) write as a fraction in lowest terms

(c) write fraction as ratio.

Example

$$\text{Simplify } \frac{5}{6} : \frac{7}{8} = \frac{5}{6} \div \frac{7}{8} = \frac{5}{6} \times \frac{8}{7} = \frac{20}{21} \text{ or } 20:21$$

To solve problems in which ratio is given:

(a) add the terms in the ratio

(b) divide the total amount that is to be put in ratio form by this sum

(c) simplify each term in the ratio by this quotient

Example

If Rs 360 is to be divided between Ram, Sham and Mohan in the ratio of 3:4:5, how much each one would receive?

$$3 + 4 + 5 = 12$$

$$360 \div 12 = 30$$

$$30 \times 3 = 90 \text{ (Ram's share)}$$

$$30 \times 4 = 120 \text{ (Sham's share)}$$

$$30 \times 5 = 150 \text{ (Mohan's share)}$$

$$360$$

Proportion

An equality of two ratios constituting a proportion. For instance: 2 : 4 :: 5 : 10 is

a proportion and is read as 2 is to 4 or 5 is to 10. Similarly a, b, x and y are in proportion of $a : b :: x : y$

Hence proportion is an expression of equality of two equal ratios (two equal fractions). The four quantities are said to be in proportion if the ratio of the first and second term is equal to the ratio of the third and fourth terms. And therefore, there are four terms in a proportion.

Example

First term : Second term =

Third term : Fourth term

$$1 : 4 = 3 : 12 = 1/4 = 3/12 \\ = 1 \times 12 = 3 \times 4$$

Work Problems

Work problems involve:

1. **Number of people working** on a job which is directly proportionate to the quantum/amount of work and inversely proportionate to the time. In other words, if more people handle a job, they can handle more quantum of job (and vice versa) and more people take less time (and vice versa).

2. **Time required** to finish a job—the time spent on a job being directly proportionate to the quantum/amount of work done. If more time is spent on a job, more quantum of work can be done.

3. **Quantum/amount of work** which is directly related to the number of people engaged and time given to them.

Units

Time = any unit of time, e.g., minute/hour/day/week etc.

Rate = at which a person works is the amount of work he can do in a given unit of time.

Persons = any unit can be used, e.g. numbers, dozen, etc.

Illustrations

1. Work at equal rates

Formula: No. of persons = x

Time required = t

$x \times t$ = time required by one person to complete a piece of work

$t + x$ = time required by "x" number of persons to complete a piece of work

Examples

(a) It takes 4 persons working at equal rate 30 days to finish the work, then one person will take $x \times t = 30 \times 4 = 120$ days.

(b) If one person can do a job in 20 days, how long will it take four persons to complete the job working at equal rate.

$$20 \div 4 = 5 \text{ days}$$

(c) Four persons are able to finish a given piece of work in 48 days. How long will 3 persons take to complete the same job?

One worker does the job in

$$48 \times 4 = 192 \text{ days}$$

Three workers will do the same job in

$$192 \div 3 = 64 \text{ days}$$

II. Work at unequal rates

When questions are posed containing unequal rates, it is essential to equalise them in order to solve the problem. Comparison is possible of only equal rates. For this, use the following steps:

(a) find out how many equal rates are there

(b) multiply equal rates by the time

(c) divide the sum obtained by the time given

Formula: In general, the work problem in which the workers work at varying rates can be solved by the following formula:

Work done by worker A +
Worker done by worker B =

$$\frac{\text{Time taken by worker B}}{\text{Time taken by worker A}} = \frac{\text{Total work done}}{\text{Total time taken}}$$

The problem below gives five of the above six factors (each given known quantities) and you have to find the unknown factor.

Example

Ram can do the job in 4 hours. Sham can do it in 5 hours. How long will they take to do it together?

$$\begin{array}{ccc} \frac{1 \text{ job}}{4 \text{ hrs}} & \frac{1 \text{ job}}{5 \text{ hrs}} & \frac{1 \text{ job}}{x \text{ hrs}} \\ 1/4 + 1/5 = 1/x = 5/20 + 4/20 = 1/x \\ = 9/20 = 1/x \end{array}$$

$$= 20/9 = x/1 = 2\frac{2}{9} = x$$

Ram and Sham together will take $2\frac{2}{9}$ hours.

Examples

(a) Ram along with 2 other typists, completes a job in 12 days. Ram and one of the typists, work twice as fast as the third. How long would it take one of the fastest typist to complete the work himself?

There are 2 typists (including Ram) who are both fast as compared to the third one who is slow.

1 slow typist will take 12×5 days = 60 days

1 fast typist = 2 slow typists. Therefore he will take $60/2$ or 30 days to complete the job.

Therefore it will take one fast typist 30 days to complete the job

(b) If 40 persons make a 4 km long road in one year, how many persons would it require to build 6 km road in $1/4$ th of the year?

To make 6 km road instead of 4 km in the same amount of time, it would require $6/4$ number of persons. Hence:

$$6/4 \times 60 = 90$$

Now the job has to be completed in 4 months instead of 12, it would require thrice the number of persons. Hence:

$$90 \times 3 = 270 \text{ persons will make 6 km road in 4 months}$$

Distance Problems

Distance or velocity problems are very

commonly included in the quantitative aptitude section. The basic formula to tackle these questions is:

$$\text{Distance travelled} = \text{Rate} \times \text{Time} \\ D = R \times T \quad \text{or} \quad d = rt$$

It involves:

(a) Distance (in miles/km or any unit of length) = D

(b) Rate (miles per hour or km per hour or any other unit of length per hour/minute or any other unit of time) = R

(c) Time (hours or any unit of time) = T

As it involves three quantities (D, R and T), the questions are also of three types:-

1. Calculation of distance

Multiply rate by time, e.g. $D = R \times T$

● If you are driving @ 30 km/hour for 2 hours, you will travel a distance of $30 \times 2 = 60$ km.

2. Calculation of rate (speed)

The rate = distance covered/travelled in a unit of time. Divide distance travelled by time taken to cover it. $R = D \div T$

● If you drive your scooter covering 200 km in 8 hours, rate (speed) = $200 \div 8 = 25$ km per hour.

3. Calculation of Time (Time taken to cover distance) Divide distance (D) by Rate (R)

● If you travel a distance of 75 km at the rate of 15 km per hour, you will cover the distance in : $D (75 \text{ km}) \div R (15) = 3$ hours

Down Stream

Another type of question related to distance travelled and speed is rowing or swimming in streams.

Formula : Distance = Speed \times Time

Average speed =

$$\frac{\left(\frac{\text{distance}}{\text{time}} \text{ during up stream}\right) + \left(\frac{\text{distance}}{\text{time}} \text{ during down stream}\right)}{2}$$

Speed of stream = Speed during down stream - average speed

Example

Hari rows downstream a distance of 50 km in 5 hours and upstream 60 km in 10 hours. What is his speed in still water and speed of stream?

$$\text{Average speed} = \frac{\left(\frac{60}{10} + \frac{50}{5}\right)}{2} = \frac{6 + 10}{2} \\ = 8 \text{ km/hour}$$

$$\text{Speed of stream} = \left(\frac{60}{5}\right) - 8 = 10 - 8 \\ = 2 \text{ km/hour}$$

Powers, Exponents And Roots

The number that is used to give a product is known as a factor. The power of a number is the number of times the number itself is to be taken as a factor, e.g., the expression 5^3 means $5 \times 5 \times 5 = 125$.



Practice Tests

In preparing these tests, we have tried to visualise the questions you are likely to face in your actual exam. Great care has been taken to frame questions which are of the same standard as those you'll encounter in your exam.

Rating : Evaluate your performance on the basis of the following score-card :

100 questions in 60 minutes – Excellent

60 questions in 60 minutes – Good

50 questions in 60 minutes – Fair

35 questions in 60 minutes – Poor

Tips : 1. Do not waste time over questions you are not sure about. 2. Give the problems some thought before choosing the answers. 3. Read the directions carefully before answering the questions. 4. Do not try to guess the answer.

Reading Comprehension

FOR CAT

Now that you are familiar with the preparation strategy for sections I & II of the Common Admission Test (CAT), get set to tackle these Reading Comprehension and Mathematical Ability tests in order to sharpen your grey cells and train them for speedy action, under stress.

Time : 35 minutes

Scores : 1. Give yourself one mark for each correct answer. 2. Deduct one mark for each wrong answer.

Then rate yourself as follows :

Excellent...28-23 Very Good...22-17 Good...16-11 Poor...Below 10

DIRECTIONS : For each of the following questions, tick mark the choice that best answers the questions. Answers are given at the end of these tests.

Directions: Read the following passages carefully and answer the questions that follow them by choosing the most appropriate one out of the four that are provided. (Time: 20 minutes)

Professional men make the same mistake. Several years ago, I walked into the office of a well known nose and throat specialist in Philadelphia. Before he even looked at my tonsils, he asked me what my business was. He wasn't interested in the size of my tonsils. He was interested in the size of my exchequer. His chief concern was not in how much he could help me. His chief concern was in how much he could get out of me. The result was he got nothing. I walked out of his office with contempt for his lack of character.

The world is full of people like that: grabbing, self-seeking. So the rare individual who unselfishly tries to serve others has an enormous advantage. He has little competition. Owen D. Young said, "The man who can put himself in the place of other men, who can understand the workings of their minds, need never worry about what the future has in store for him."

From *How To Win Friends And*

Influence People

1. The professional nose and throat specialist asked the author
 - (a) What his trouble was
 - (b) What his business was
 - (c) What his name was
 - (d) What his intention was
2. The chief concern of the specialist lay
 - (a) In the nature of the author's illness
 - (b) In how much he could help the author
 - (c) In how much he could get out of the author
 - (d) In how quickly he could cure the author's malady
3. The author walked out of the specialist's office
 - (a) With respect for his professional competence
 - (b) With admiration for the professional's straightforwardness
 - (c) With a feeling of indifference towards the professional
 - (d) With a feeling of contempt towards the specialist
4. The world is indeed full of people who are
 - (a) Kind and helpful

- (b) Selfish and short-sighted
- (c) Full of the spirit of cooperation
- (d) Ill-tempered

5. Owen D. Young said that the man who is

- (a) Honest always gets success
- (b) Selfless reaches the top of his profession
- (c) Greedy fails miserably in life
- (d) Able to think from the point of view of others need not have any worry about his future

6. The phrase 'grabbing, self-seeking' means

- (a) Cruel and vicious
- (b) Selfish and possessive
- (c) Blunt and arrogant
- (d) Proud and assertive

7. What is the advantage that an unselfish individual has?

- (a) He is lost in a crowd of selfish people
- (b) He is not very impractical
- (c) He does not face much competition in the world
- (d) As he does not face much competition, he can easily do what others cannot either think or do

There is, in fact, only one reason why underdeveloped societies like ours establish and maintain universities. We do so as an investment for our future. We are spending large and disproportionate amounts of money on a few individuals, so that they should in the future make a disproportionate return to the society. We are investing in a man's brain in just the same way as we invest in a tractor; and just as we expect the tractor to do many times as much work for us as a handhoe, so we expect the student we have trained to make many times as great a contribution to our well being as the man who had not had this good fortune. We are giving to the student while he is at the university, so that we may receive more from him afterwards. There is nothing

altruistic about it; poor people cannot afford financial altruism. We have a right to expect things from university graduates and others who have had higher education of any kind; we do not just have hope, but an expectation.

From *The Intellectual Need Society*

8. Underdeveloped societies establish and maintain universities because
 - (a) The universities produce educated manpower.
 - (b) Such societies need highly skilled people
 - (c) There is an acute shortage of skilled people
 - (d) They want to have a bright future
9. How much money is spent on a few individuals in the universities?
 - (a) An adequate amount of money is spent on some individuals in the universities
 - (b) Much more money than underdeveloped societies can really afford is spent on a few individuals
 - (c) Little money is spent on the individuals in the universities
 - (d) Much money is spent on the individuals in the universities
10. How much work is expected from a tractor?
 - (a) A tractor does as much work as a handhoe does
 - (b) A tractor does much more work than is done by four pairs of bullocks
 - (c) A tractor does many times more work than a handhoe
 - (d) A tractor does far more work than any group of farmers can do
11. Why is so much money spent on a student at the university?
 - (a) So that he can concentrate on his studies
 - (b) So that we can get far more from him when he leaves the university
 - (c) So that he can better his professional skill
 - (d) So that he does not have any financial worry
12. What is meant by the phrase 'financial altruism'?
 - (a) It means a careless use of finances
 - (b) It means financial irresponsibility
 - (c) It means financial accountability
 - (d) It means an overgenerous spending of money on others
13. What do we expect from a university graduate in developing societies?
 - (a) We expect a university graduate to maintain high professional standards
 - (b) We expect a university graduate to return to the society far more than he gets from it
 - (c) We expect a university graduate to be forward looking in his

Outlook

- (d) We expect a university graduate to be a man of action
14. We are investing in a man's brain in just the same way as we invest in a tractor. It means that
 - (a) Spending money on university graduates is as useful as spending on tractors
 - (b) Spending money on university graduates is far more useful than spending money on tractors
 - (c) Spending money on university graduates is exactly with the same intention as spending money on tractors
 - (d) Spending money on university graduates is slightly more useful than spending money on tractors

There is a familiar America. It is celebrated in speeches and advertised on television and in the magazines. It has the highest mass standard of living the world has ever known.

In the 1950's this America worried about itself, yet even its anxieties were products of abundance. The title of a brilliant book was widely misinterpreted, and the familiar America began to call itself the affluent society. There was introspection about the Madison Avenue and tail fins; there was discussion of the emotional suffering taking place in the suburbs. In all this, there was an implicit assumption that the basic grinding economic problems had been solved in the United States. In this theory the nations' problems were no longer a matter of basic human needs, of food, shelter and clothing. Now they were seen as qualitative, a question of learning to live decently amid luxury.

While this discussion was carried on, there existed another America. In it dwelt somewhere between 40,000,000 and 50,000,000 citizens of this land. They were poor. They still are.

To be sure, the other America is not impoverished in the same sense as those poor nations where millions cling to hunger as a defence against starvation. This country has escaped such extremes. That does not change the fact that tens of millions of Americans are, at this very moment, maimed in body and spirit, existing at levels beneath those necessary for human decency. If these people are not starving they are hungry and sometimes fat with hunger, for that is what cheap foods do. They are without adequate housing and education and medical care.

From *The Other America*

15. There is a familiar America
 - (a) Which has the highest per capita

Income in the world

- (b) Which has the highest GNP in the world
- (c) Which has the highest affluence in the world.
- (d) Which has the highest mass standard of living in the world
16. The worries of this America
 - (a) Were a product of the II World War
 - (b) Were a product of world-wide economic crisis
 - (c) Were the result of its wealth
 - (d) Were products of cut-throat competition
17. An assumption implicit in the affluent society was
 - (a) That all people were enjoying affluence
 - (b) That the problem of destitution had been solved
 - (c) That hunger had been abolished.
 - (d) That people were indeed happy..
18. The phrase, 'basic grinding economic problem' means
 - (a) that the basic needs of the people have been solved
 - (b) That the people suffer terribly due to the absence of adequate housing, education and medical care
 - (c) That the people are without adequate housing, education and shelter
 - (d) That the people have become desperate due to widespread poverty
19. The other America
 - (a) Is poor in the same sense as the people of the Third World are
 - (b) Is full of marginal, unemployable people
 - (c) Is poor because it suffers from starvation
 - (d) Is hardly poor in the same sense as those poor nations where millions cannot escape starvation
20. The citizens of the other America
 - (a) Are hungry because they go without any food
 - (b) Are hungry because they do not get a rich diet
 - (c) Are hungry because they get only cheap food
 - (d) Are fat yet hungry because the food that they eat is poor in nutritive value
21. The clause, "where millions cling to hunger as a defence against starvation" means
 - (a) That the people of the poor nations foolishly accept hunger as a barrier against starvation
 - (b) That the people of the poor nations endure both hunger and starvation
 - (c) That the people of the poor nations cannot escape either

hunger or starvation

- (d) That the people of the poor nations try to transcend both hunger and starvation

Directions Questions 1 & 2 consist of groups of sentences followed by suggested sequential arrangements. Select the best possible sequence of sentences

- 22 (i) The decisions about the suitable mix of fruit trees fodder trees fuelwood trees medicinal plants types of grasses sources of fibres and house construction material should be taken by the villagers themselves
(ii) Only by ensuring that social forestry meets the multifaceted needs of the people can the protected forests be saved
(iii) The forests grown by them must belong to them even where the wasteland belongs to the government
(iv) Social forestry thus far has been led into wrong channels
(v) Village forests must now be of the people for the people and by the people
(a) (i) (ii) (iv) (v) (iii) (c) (iv) (v) (i) (iii) (ii)
(b) (iv) (ii) (iii) (ii) (i) (d) (ii) (i) (v) (iv) (iii)
(i) Both developed and developing nations have learned that politically and economically our destinies are intertwined
(ii) New nations are confronted by serious challenges of regional security and economic development
(iii) Our well-being and security are closely interrelated
(iv) The euphoria of the early independence period has given way to a sober appreciation of the long-term problems of nation-building
(v) We face many common challenges and opportunities for the future
(a) (ii) (iii) (v) (iv) (i) (c) (iii) (ii) (v) (i) (iv)
(b) (iv) (ii) (i) (iii) (v) (d) (ii) (iv) (v) (iii) (i)

Directions In questions 3-7 the four choices that follow each italicised sentence represent various ways of rewriting it. Select the most appropriate choice

- 24 *I certainly hope you are having a good time at college this year and realising your potentiality for intellectual growth and development*
(a) I certainly hope you have a good time at college this year and realise your potentiality for intellectual growth and development
(b) I certainly hope you will be having a good time at the college and realising your potentiality for intellectual growth and development
(c) I certainly hope you are having a good time at college this year and

getting a lot out of it

- (d) I am certainly hoping that you are having a good time at college this year and realising your potentiality for intellectual growth and development
25 *He told me what to do and I accomplished the operation.*
(a) He told me what to do and I did it
(b) He told me what to do and I completed the operation
(c) He told me what to do and I fulfilled the operation
(d) He told me what to do and I achieved the operation
26 *That subject, as you have probably guessed, is none other than the question of which is the most interesting to watch—basketball or football*
(a) I shall try to determine which is most interesting to watch—basketball or football
(b) The subject is—which is more interesting to watch basketball or football?
(c) I shall try to determine which is the most interesting basketball or football
(d) The subject as you have probably guessed is none other than the question which is the most interesting basketball or football
27 *The prime minister explained that*

the nations of the West did not want to gang up on the Soviet Union.

- (a) The prime minister explained that the nations of the West did not want to gang up against the Soviet Union
(b) The prime minister explained that the nations of West could not gang up against the Soviet Union
(c) The prime minister explained that the nations of the West did not want to organise and foment trouble against the Soviet Union
(d) The prime Minister explained that the nations of the West did not want to appease the Soviet Union
28 *The maid servant swept the room carefully and the furniture and shelves were dusted.*
(a) The maid servant the room carefully and the furnitures and shelves were dusted
(b) The maid servant swept the room carefully and dusted the furnitures and shelves
(c) The maid servant sweeping the room carefully dusted furnitures and shelves
(d) The maid servant dusted the furniture and shelves and swept the room

N P SINGH

Mathematical Ability

FOR CAT

The following set of questions is calculated to assess your mathematical ability. And hone your grey cells to razor-sharpness.

Time : 25 minutes.

Scores : 1 Deduct one mark for each wrong answer

Then rate yourself as follows :

Excellent...20-25 Very Good...14-19 Good...13-18
Fair...7-12 Poor...Below 7

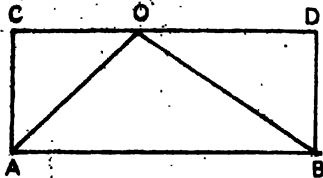
DIRECTIONS For each of the following questions, tick mark the choice that best answers the questions. Answers are given at the end of these tests

- 1 Rahul borrowed Rs 1 600 @ 10% interest p a for a period of two years. If interest is compounded annually compute compound interest payable after two years
(a) Rs 320 (b) Rs 336
(c) Rs 360 (d) Rs 375
- 2 If interest is compounded quarterly compute compound interest on Rs 1 200 @ 20%
(a) Rs 158 (b) Rs 210
(c) Rs 250 (d) Rs 259
- 3 The ratio of 50 cm and 14 m is
(a) 1 : 14 (b) 1 : 10
(c) 1 : 28 (d) 2 : 10
- 4 The ratio between 3 25 and 8 125 is
(a) 1 : 78 (b) 2 : 8
(c) 1 : 3 (d) 2 : 5
- 5 Rahul Rakesh and Ramesh started a partnership venture having share ratio of 4 : 5 : 6 respectively. At the year end a profit of Rs 405m was declared. How much will Ramesh get as his share of profit?
(a) Rs 108m (b) Rs 135m
(c) Rs 162m (d) Rs 182m
- 6 If x is 20% less than y then y exceeds x by
(a) 45% (b) 50%
(c) 25% (d) 30%
- 7 Ramesh spends 15% of his salary on house rent, 10% on provident fund

and 5% on commission. After selling Rs 24,000 p.s., he spends the remaining on his domestic budget. What is his monthly salary?

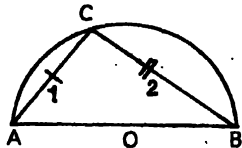
- (a) Rs 6,500 (b) Rs 6,000
(c) Rs 4,500 (d) Rs 5,000

- 9 In the given figure, what is the ratio of the triangular area $\triangle ACB$ to the area of the rectangle $ABCD$?



- (a) 1 : 4 (b) 1 : 2
(c) 1 : 1 (d) 1 : 3

- 10 The figure ACB is a semicircle having centre O on the base AB . What is the area of the semicircle?



- (a) $\frac{25\pi}{8}$ (b) $\frac{1}{2}\sqrt{5}$
(c) $\frac{5\pi}{8}$ (d) $\frac{5\pi}{2}$

- 11 Raju travels from a given point x to y at an average speed of 60 km per hour in two hours. He then returns from point y to x at an average speed of 40 km. The distance between x and y is 120 km. What was Raju's average speed for the to and fro trip between the points x and y ?

- (a) 50 km per hour (b) 48 km per hour
(c) 55 km per hour (d) 45 km per hour

- 12 A has a saving bank balance of Rs 3,000. He transfers 45% of this balance to his current account where he has a debit balance of Rs 300. Calculate the credit balance A should have in his current account after this transfer?

- (a) Rs 1,350 (b) Rs 1,500
(c) Rs 1,150 (d) Rs 1,050

- 13 A whole-sale merchant stocked sugar worth Rs 75,000 when it was selling at Rs 7.50 per kg. He sold out his entire stock for Rs 67,500 after six months. Compute his loss percentage.

- (a) 10% (b) less than 10%
(c) more than 10% (d) 8%

- 14 If a sofa set is sold at Rs 540 and the seller incurs a loss of 10%, find the cost price of the sofa set.

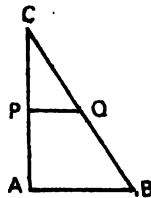
- (a) Rs 600 (b) Rs 580
(c) Rs 650 (d) Rs 550

- 15 There is a difference of Rs 3 in selling

an article at 6% and 5% profit. Calculate the cost price of the article.

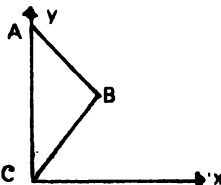
- (a) Rs 312 (b) Rs 300
(c) Rs 315 (d) Rs 310

- 16 In the triangle ABC , $CP = PA$, PQ is parallel to AB , and is 4 inches in length. Also PA is 3 inches. What is the length of AB ?



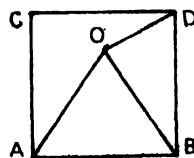
- (a) 6 inches (b) 8 inches
(c) 7 inches (d) 10 inches

- 17 If the area of the triangle ABC is 64, find the altitude from B to CA .



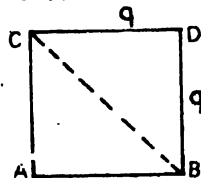
- (a) 8 (b) 16
(c) 32 (d) 10

- 18 $ACDB$ is a square in which ABO is an equilateral angle. How many degrees is angle ODB ?



- (a) 60° (b) 75°
(c) 80° (d) 30°

- 19 In the given figure point C is on one side of a square and point B is on the opposite side. If each side of the square is 9 inches (perimeter 36 inches), what is the longest possible length of CB ?



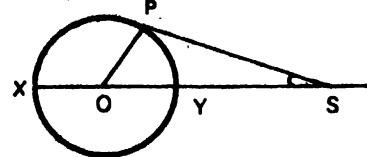
- (a) $9\sqrt{2}$ (b) 9
(c) $9\frac{1}{2}$ (d) 4.5

- 20 In the figure, CO is perpendicular to AB . If $CA = CB = 20$ and $CO = 18$, then AB is



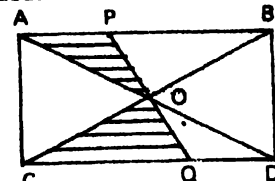
- (a) 16.5 (b) 18.2
(c) 18.2 (d) 22

- 21 In the circle xy is the diameter. If secant xS and tangent $PS = 8$, find the number of units in the diameter of the circle.



- (a) 18 (b) 32
(c) 12 (d) $3\sqrt{2}$

- 22 In the given figure, what percentage of the area of rectangle $ABCD$ is shaded?



- (a) 55% (b) 50%
(c) 30% (d) 25%

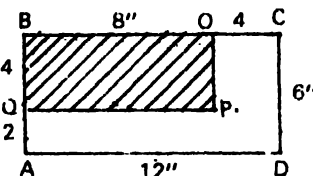
- 23 A rectangular figure has 10% of its height and 30% of its width shaded. What percentage of the area remains unshaded?

- (a) 70% (b) 63%
(c) 37% (d) 30%

- 24 An artist makes a sketch on a chart paper of 9" x 12". He leaves 1" margin on both sides and $1\frac{1}{2}$ " margin on top and bottom. What fraction of the chart paper did he use to make his sketch?

- (a) $\frac{9}{12}$ (b) $\frac{7}{12}$
(c) $\frac{7}{9}$ (d) $\frac{9}{7}$

- 25 A rectangular board $ABCD$ has a shaded portion $BOPQ$, the length and width of which is $\frac{2}{3}$ rd of the corresponding parts of the board $ABCD$. $BOC = 12''$ and $BQA = 6''$. The area of the unshaded part is



- (a) 72 sq inch (b) 40 sq inch
(c) 32 sq inch (d) 24 sq inch

- 26 Akbar, Raju and George invested a sum of Rs 12,000 for four, five and six months respectively. The investment yielded a gross profit of Rs 4,500 after six months. What are their respective shares in this profit amount?

- (a) 1,200/1,500/1,500
(b) 1,200/1,500/1,800
(c) 1,200/1,800/1,500
(d) 1,200/1,800/1,200

E.T.

ANSWERS

Reading Comprehension

- 1 (b) The professional was mainly interested in his bank balance, not in his welfare.
- 2 (c) The same argument is valid.
- 3 (d) The author hated the professional's money-mindedness.
- 4 (b) World is full of selfish people.
- 5 (d) Their future is guaranteed.
- 6 (b) Grabbing means the tendency to have more and more.
- 7 (d) (d) is preferable to (c) because it gives a more elaborate answer. (a) and (b) are simply distractors.
- 8 (d) While (a), (b) and (c) are true in general sense, (d) is the answer appropriate contextually.
- 9 (b) While (a) and (c) are ruled out, (b) is the answer. It contains the appropriate phrase "can really afford" which is equivalent to "disproportionate expenditure"
- 10 (c) Contextually precise.
- 11 (b) Contextually precise.
- 12 (d) Altruism is tendency to help others in the best possible way.
- 13 (b) Contextually precise (a) and (c) are true only in a general sense.
- 14 (c) Contextually precise. (b) and (d) are simple distractors.
- 15 (d) (a) and (b) are simple distractors. It is (d) which contains the precise phrase 'highest mass standard of living'
- 16 (c) It is from its affluence and abundance that the worries of the familiar America arise.
- 17 (b) Contextually precise. Destitution refers to the poverty of the people at the bottom of the social pyramid.
- 18 (b) While (d) and (c) are true in a general sense, (b) is contextually prec. The phrase 'basic grinding economic problem' means the terrible suffering of the people due to poverty.
- 19 (d) The poverty of the other America is different from the poverty of the people of the Third World. They do not suffer from starvation.
- 20 (d) Contextually precise. (They eat and yet they remain hungry. Their food is cheap and devoid of nutrition).
- 21 (a) While (b) and (c) are simply distractors, (a) is the correct answer. It contains the key phrase 'foolishly accept' which is the nearest equivalent to the phrase 'cling to hunger'.
- 22 (c) (iv) (v) (i) (iii) (ii)
- 23 (b) (iv) (ii) (i) (iii) (v)
- 24 (c) It is a specimen of an informal kind of writing in which the clause realising your potentiality for growth and development is not appropriate.
- 25 (a) It is again an informal kind of writing in which the clause 'I completed the operation' is not appropriate. It is a formal kind of expression. As such, the correct answer is (a). (c) and (d) are unacceptable, containing phrase like 'fulfilled the operation' and 'achieved the operation'.
- 26 (b) Most is used in (c) and (d) which does not convey the sense or comparison between basketball and football. (b) is correct answer because 'more' is an adjective of comparative degree.
- 27 (c) (c) and (b) contain the expression gang-up which is not appropriate in formal kind of writing. (d) contains the word 'appease' which does not suit the context. The correct answer is (c). It contains the appropriate expression, 'organise and foment trouble, against the Soviet Union.
- 28 (n) Both the clauses in the sentence are in active voice. In (d) the order of activity is reversed, first Dusting then Sweeping. In (a) and (c) furniture is used which is always against usage. Furniture is always used in the

- 1 (a) $I = p \times r \times t$, $p = \text{Rs } 1,600$, $r = 10\%$, $t = 2$ years
 I for 1st year $= \frac{1,600 \times 10 \times 1}{100} = \text{Rs } 160$ (a)
 p for 2nd year $= \text{Rs } (1,600 + 160) = \text{Rs } 1,760$
 $\therefore I$ for 2nd year $= \frac{1,760 \times 10 \times 1}{100} = \text{Rs } 176$ (b)
 $CI = a + b = \text{Rs } (160 + 176) = \text{Rs } 336$
- 2 (d) $p = \text{Rs } 1,200$, $r = 1/4$ of $20\% = 5\%$ and $n = 4$ (4 conversions)
 $CI = \text{Rs } 1,200 \left(1 + \frac{5}{100}\right)^4 - 1$
 $= \text{Rs } 1,200 \left(\frac{21}{20}\right)^4 - 1$
 $= \text{Rs } 1,200 \left(\frac{441}{400}\right)^2 - 1$
 $= \text{Rs } 1,200 \left(\frac{441}{400} - 1\right) \left(\frac{441}{400} + 1\right)$
 $= \text{Rs } 1,200 \left(\frac{41}{100} \times \frac{841}{400}\right) = \text{Rs } 259$ approximately
- 3 (c) Ratio is between two quantities of the same kind. Therefore convert 14 m into cm $= 1,400$ cm. Hence ratio between 50 cm and 1,400 cm is 1 : 28
- 4 (d) $3.25 : 8.125 = \frac{325}{100} : \frac{8,125}{1,000}$
 $= 3,250 : 8,125$ (multiplying the terms by 1,000)
Now the HCF of 3,250 and 8,125 $= 1,625 = 2 : 5$
- 5 (c) Share ratios $= 4 : 5 : 6 = 15$
 $= \frac{4}{15} : \frac{5}{15} : \frac{6}{15}$ in profit of Rs 1
Ramesh's share of profit $= \text{Rs } \left(\frac{6}{15} \times 450\right) = \text{Rs } 162$ m.
- 6 (c) $x = 20\%$ less than y
If $y = 100$, then $x = (100 - 20) = 80$
Hence $y = 100$ and $x = 80$ and y exceeds x by
 $100 - 80 = 20 = \frac{20 \times 100}{80}\%$ or 25%
- 7 (d) Rs 5,000 per month
- 8 (b) The triangle and the rectangle have the common base and equal altitudes. Area of triangle AOB $= 1/2 bh$, area of the rectangle ACDB $= bh$. Thus the ratio of the areas $= 1 : 2$.
- 9 (b) Angle ACB is the right angle inscribed in the semicircle. Therefore $(AB)^2 = 1^2 + 2^2 = 5$
 $AB = \sqrt{5}$ and $OB = r = 1/2 \sqrt{5}$
Area of semicircle $= 1/2 \left(\sqrt{\frac{5}{2}}\right)^2$
 $= \frac{\pi(5)}{2 \times 4} = \frac{5\pi}{8}$
- 10 (b) In the first trip Raju covers 120 km in 2 hrs @ 60 km per hour speed. In the return trip he slows down to 40 km per hour, which should take him 3 hours. Hence total distance covered is 240 km in 5 hours.
Average speed $= \frac{\text{Total distance}}{\text{Total time}}$
 $= \frac{240}{5 \text{ hrs}} \text{ km} = 48 \text{ km per hour}$
- 11 (d) Saving bank balance $= \text{Rs } 3,000$
Current a/c balance $= \text{Rs } 300$
45% transferred from Saving Bank
account to current a/c $= \text{Rs } \left(\frac{45}{100} \times 3,000\right) = \text{Rs } 1,350$
Current a/c balance $= \text{Rs } 1,350 + \text{Rs } 300 = \text{Rs } 1,650$
i.e. 45% of Rs 3,000 $= \text{Rs } 300 + \text{Rs } 1,050$
- 12 (a) CP $= \text{Rs } 75,000$, SP $= \text{Rs } 67,500$

$$\text{Loss} = \text{Rs } (25,000 - 17,500) = \text{Rs } 7,500$$

$$\text{Loss \%} = \left(\frac{7,500}{75,000} \times 100 \right) = 10\%$$

By adding storage expenses and interest on investment the loss becomes more than 10%.

- 13 (a) SP = Rs 540, loss 10%, value recovered = 90%

$$\text{Hence CP} = \frac{100}{90} \times 540 = \text{Rs } 600$$

- 14 (b) Assume CP = Rs 100. SP at 4% profit = Rs 104 and SP at 5% profit = Rs 105

$$\text{Difference between 2 SPs} = \text{Rs } (105 - 104) = \text{Rs } 1$$

If the difference is Rs 1, CP = Rs 100. Therefore when the difference is Rs 3, CP $(100 \times 3) = \text{Rs } 300$

- 15 (b) Since PQ is parallel to AB, the triangles QCP and CBA are similar. Therefore the corresponding sides are proportional. So PQ is to AB as CP is to CA. Since CP = PA, CP/CA = 1/2. Therefore AB is twice QP or 8 inches.

- 16 (b) Area of triangle = ABC = $\frac{1}{2} (\text{CA} \times \text{altitude})$

$$64 = \frac{1}{2} (8h)$$

$$64 = 4h$$

$$h = 16$$

- 17 (b) Since angle ABO = 60° and angle ABD = 90° therefore angle OBD = 90 - 60 = 30°

Since OB = BD, the base angles of triangle OBD are each = $\frac{180 - 30}{2} = \frac{150}{2} = 75^\circ$

- 18 (a) The side of the square $\left(\frac{36}{4}\right) = 9$

The largest possible length of CB is obtained by making CB a diagonal of the square. Here $CB = 9\sqrt{2}$

- 19 (b) CO ⊥ AB therefore in right angle COB

$$x^2 + 18^2 = 20^2$$

$$x^2 = 20^2 - 18^2$$

$$= (20 + 18)(20 - 18)$$

$$= 38 \times 2 = 76$$

$$x = 7.6$$

$$\text{Thus AB} = 15.2$$

- 20 (c) In the right angle SPO

$$SO^2 = r^2 + 8^2$$

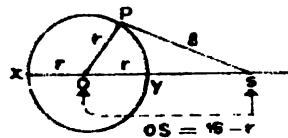
$$(16 - r)^2 = r^2 + 32$$

$$128 - 32r + r^2 = r^2 + 32$$

$$96 = 32r$$

$$r = 6$$

$$\text{Hence diameter} = 12 = xy$$



- 21 (d) Since $\triangle PBO \cong \triangle COQ$.

It follows that the shaded area =

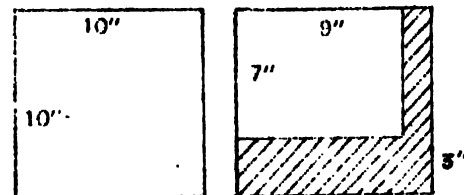
$$\triangle APO + \triangle PBO = \triangle AOB$$

$$\text{R.H. } \triangle AOB = \frac{1}{2} \triangle ABC = \frac{1}{4}$$

$$ABCD = \frac{1}{4} = 25\%$$



- 22 (b)

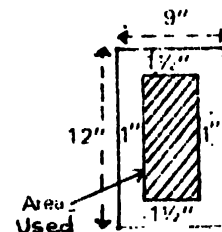


Let the blank figure be 10 X 10.

Then new figure 9 by 7 =

$$\frac{63}{100} = 63\%$$

- 23 (b)



$$\text{Drawing space} = 12'' - 3'' = 9''$$

$$\text{long and } 9'' - 2'' = 7'' \text{ wide.}$$

Hence fraction used for making the sketch

$$\frac{9 \times 7}{9 \times 12} = \frac{7}{12}$$

- 24 (b) AD or BOC = 12'', BO = 8'', CD or BQA = 6'', BQ = 4'', Area BOPQ = 32 sq inch; Area ABCD = 72 sq inch; Area unshaded = 72 - 32 = 40 sq inch.

- 25 (b) Ratio : Akbar : Raju : George

$$12,000 \times 4 : 12,000 \times 5 : 12,000 \times 6$$

$$\text{Akbar's share in profit} = \text{Rs } \left(\frac{4}{4+5+6} \right) \times 4,500$$

$$= \text{Rs } \frac{4}{15} \times 4,500 = \text{Rs } 1,200$$

$$\text{Raju's share in profit} = \text{Rs } \frac{5}{15} \times 4,500 = \text{Rs } 1,500$$

$$\text{George's share in profit} = \text{Rs } \frac{6}{15} \times 4,500 = \text{Rs } 1,800$$

LITTLE KNOWN FACTS...

Why does a soldier salute?

Everyone has seen a soldier salute by raising his palm smartly to his forehead. This is an age-old practice which originated in the Middle Ages when knights took part in duels to display their skill in using the spear and the lance. A lady was chosen as queen to give away prizes to the winner and when the victorious knight went up to her throne, he would shield his eyes with his hand, as though her beauty dazzled him. This gesture of reverence to the queen continues till today in the form of a salute.

In what way do hares differ from rabbits?

A hare resembles a rabbit in many ways, yet it is easy to distinguish one from the other. A hare has longer ears and runs at a greater speed than the rabbit. The hind legs of the hare, too, are longer than those of a rabbit and the former

can deal out powerful kicks when the latter is cornered. The young rabbit is born quite blind and without any fur, whereas the hare has fur and the new born hare can see. A hare, unlike a rabbit, does not live in underground warrens but makes a nest in the open.

Why does the sky not fall?

It is impossible for the sky to fall down because there is actually nothing in the sky to fall. What we call the sky is only the reflection of the sun's rays on the belt of the air that encircles the earth.

Why do we shake hands when we meet?

In the olden days there were no street lights and no policemen to patrol the streets. Thieves lurked about in the dark and men carried swords for defence. When two men met on the street it was customary to hold each other's

weapon hand (the right hand) to show that there was no weapon in it and that they met as friends. Thus, through the times, men came to regard holding of each other's hands as a sign of greeting and friendship.

How far can a kangaroo leap?

The kangaroo is the star leaper in the animal world. He can effortlessly jump 70 ft and is known to clear a 15-ft fence.

The springbok, a member of the antelope family is another clever jumper. He can leap 12 ft in the air, with utmost ease. Lions, tigers and leopards are all great jumpers. Even the Morocco goat can clear a fence 12-ft high. Although horses are known to be good jumpers their record falls far behind the kangaroo's. The longest jump by a horse is 37 ft.

R.C. Goyal, Solan

Quantitative Aptitude

BY RAVI PRAKASH & AJAY KUMAR

FOR NDA, CDS EXAMS & CAT

This section is specially formulated for those appearing in the forthcoming CDS, NDA exams and IIM's CAT.

DIRECTIONS: Tick mark the choice that best answers each question. Answers with explanations appear at the end of this test.

1. What number if increased by 179 and divided by 13 will give 169?
(a) 1,768 (b) 2,018
(c) 2,108 (d) 2,768
2. Divide 99 into three parts so that the first number increased by five the second diminished by five and the third multiplied by five shall be equal to
(a) 35, 45, 19 (b) 38, 48, 13
(c) 30, 60, 9 (d) 40, 50, 9
3. A number of two digits exceeds three times the sum of its digits by five. If we add 45 to the number, we get the number obtained by reversing its digits. The number is
(a) 36 (b) 39
(c) 38 (d) 41
4. The least number which when divided by 24, 32 and 36 leaves remainder 19 is
(a) 307 (b) 309
(c) 288 (d) 269
5. The Sum of three positive numbers in arithmetic progression is 18. If 2, 4, 11 are added to these, the resulting numbers are in continued proportions. The numbers are
(a) 4, 6, 8 (b) 2, 6, 10
(c) 3, 6, 9 (d) 1, 6, 11
6. Divide 70 into three numbers which are in continued or geometric proportions and are such that if two extremes are multiplied by 4 and the middle one by 5 the resulting numbers are in arithmetic progression. The numbers are
(a) 10, 20, 40
(b) 5, 20, 45
(c) 15, 20, 35
(d) None of the above
7. The sum of three numbers in arithmetic progression is 15 and their product is 80. The numbers are
(a) 2, 5, 8 (b) 3, 5, 7
(c) 4, 5, 6 (d) None of the above
8. Largest number of four digits which when divided by 12, 15, 20 or 54 leaves in each case remainder 4 is
(a) 9,994 (b) 9,824
(c) 9,724 (d) 9,624
9. Largest four digit number which is a perfect square is
(a) 9,604 (b) 9,936
(c) 9,409 (d) 9,801
10. $11^5 - 1$ is divisible by
(a) 20 (b) 30
(c) 40 (d) 50
11. Last digit of 9^{99} is
(a) 1 (b) 9
(c) 3 (d) None of the above
12. A farmer goes to the market with a certain number of boiled eggs in his basket. To the first of his customers he sells half of the eggs in the basket plus half an egg. To his second customer he sells half of the remaining eggs plus half an egg. He repeats the same thing with his third and fourth customers. After this he had no eggs to sell. How many eggs did the basket contain?
(a) 31 (b) 7
(c) 63 (d) 15
13. Which of the following numbers lies between the other two: 31^{11} , 17^{14} , 2^{55}
(a) 31^{11} (b) 17^{14}
(c) 2^{55}
14. The greatest number that will divide 719 and 930 leaving remainders five and six respectively is
(a) 62 (b) 42
(c) 92 (d) 44
15. The value of $0.8 \times 0.8 \times 0.8 - 0.5 \times 0.5 \times 0.5$
 $0.8 \times 0.8 + 0.8 \times 0.5 + 0.5 \times 0.5$ is
(a) 0.30 (b) 0.24
(c) 0.96 (d) 0.42
16. The square root of 0.4 is nearly equal to
(a) 0.02 (b) 0.63
(c) 0.2 (d) 0.81
17. A zoo has some birds and animals. If heads are counted they number 100, but if legs are counted they number 280. Find the number of animals in the zoo.
(a) 40 (b) 60
(c) 50 (d) 30
18. The approximate value of $\sqrt{\frac{3+\sqrt{8}}{3-\sqrt{8}}}$ is
(a) 5.282 (b) 5.432
(c) 5.828 (d) 5.835
19. The sum of two positive numbers is 16 and the sum of their squares is 130. Their product is
(a) 56 (b) 45
(c) 28 (d) 63
20. The recurring decimal $0.\overline{36}$ is equal to the fraction
(a) $\frac{3}{11}$ (b) $\frac{9}{50}$
(c) $\frac{4}{11}$ (d) None of the above
21. The recurring decimal $0.\overline{27927}$ is equal to the fraction
(a) $\frac{31}{111}$ (b) $\frac{32}{111}$
(c) $\frac{927}{100}$ (d) $\frac{927}{999}$
22. The decimal 1.01 001 0001-00001... represents the number
(a) $\frac{12}{11}$ (b) $\frac{13}{12}$
(c) $\frac{14}{13}$ (d) None of the above
23. Five years ago the age of the father was thrice the age of his son. Ten years hence, the age of the father will be twice the age of his son. The present ages of the father and son are
(a) 50, 20 (b) 40, 15
(c) 35, 5 (d) 65, 25
24. The average monthly income of a person for the first eight months of a year exceeds that for the first seven months of the year by Rs 25. If he earns Rs 1,275 in the eighth month of the year, the average monthly income for the first eight months of the year is
(a) Rs 1,000 (b) Rs 1,200
(c) Rs 1,250 (d) Rs 1,100
25. If the price of sugar increases by 25%, by what percentage should a housewife decrease her consumption so that her expenditure on sugar remains the same?
(a) 20% (b) 25%
(c) 10% (d) 30%
26. A wholesaler allows a discount of 20% to the retailer. The retailer sells at 5% below the list price. If the customer pays Rs 19 for an article, the percentage profit of the retailer is

- (a) 18.75% (b) 19.5%
(c) 18.25% (d) 18.5%
27. One vessel contains a mixture of milk and water in the proportion of 4:5 and in another vessel they are in the proportion of 5:1. In what proportion should they be mixed to get a mixture of milk and water in the proportion of 5:4
(a) 5:2 (b) 5:1
(c) 2:1 (d) 3:2
28. A rectangular plot of land whose area is 1,107 sqm becomes a square when its length is decreased by 3m and breadth is increased by 11m. Dimensions of the rectangular plot of land are given by
(a) 41, 27 (b) 123, 9
(c) 369, 3 (d) None of the above
29. A fencing is erected along a diagonal of a rectangular park whose dimensions are 12 m and 5m. If Rs 17 is the cost of fencing per metre, then the total cost of fencing is
(a) Rs 305 (b) Rs 221
(c) Rs 307 (d) Rs 225
30. The area of four walls of the hall whose breadth is 15 m and height is 8 m is 1068 sqm. The length of the hall is
(a) 18 m (b) 17 m
(c) 16 m (d) 15.5 m
31. The area of a 29m long rectangular field is 696 sqm. The perimeter of the field is
(a) 104 m (b) 106 m
(c) 108 m (d) 110 m
32. The scale of a plan is 5 cm to 2 km. The area of a town represented by an area 5,625 sqm on the plan is given by
(a) 1,600 sq km
(b) 1,000 sq km
(c) 2,250 sq km
(d) 900 sq km
33. The diameter of a wheel is 98 cm. Number of revolutions it will have to make to cover a distance of 1 km and 540 m is
(a) 500 (b) 600
(c) 700 (d) 800
34. An equilateral triangle of sides 12 cm has the same area as that of a circle. The radius of the circle is approximately equal to
(a) 4.46 cm (b) 4.64 cm
(c) 4.93 cm (d) 4.83 cm
35. The diameter of a circular park is 138 m its area is
(a) 1.4963 hectares
(b) 1.9475 hectares
(c) 1.5497 hectares
(d) 2.1339 hectares
36. The proportion in which two kinds of tea, one costing Rs 44 and the other Rs 39, should be mixed so that the mixture can be sold at Rs 42 is
(a) 3:2 (b) 2:3
(c) 1:4 (d) 4:1
37. A sum of money placed at compound interest doubles itself in six years. It will become eight times itself in
(a) 48 years (b) 24 years
(c) 18 years (d) 12 years
38. The difference between the true discount and banker's discount on a certain sum due four months hence is five paise. If the rate of interest is 6%, the amount of the bill is
(a) Rs 125.50 (b) Rs 127.50
(c) Rs 129.50 (d) Rs 132.50
39. A sum of money invested at compound interest amounts to Rs 10,890 in two years and Rs 11,979 in three years. The sum invested is
(a) Rs 9,500 (b) Rs 9,000
(c) Rs 9,700 (d) Rs 10,000
40. A machine depreciates in value at the rate of 10% of its value at the beginning of the year. If the machine was purchased for Rs 9,000 its value at the end of the third year will be
(a) Rs 6,089 (b) Rs 6,061
(c) Rs 6,561 (d) Rs 6,169
41. The face value of a bill discounted at 5% per annum 73 days earlier than the date of maturity, the banker's gain being Rs 10, is
(a) Rs 101,000
(b) Rs 100,000
(c) Rs 110,000
(d) None of the above
42. A trader mixes three varieties of tea costing Rs 32.50, Rs 40 and Rs 36.50 respectively per kg in the ratio 5:4:1. The selling price of the mixture for the trader to make a profit of 20% should be
(a) Rs 45.08 (b) Rs 43.08
(c) Rs 42.04 (d) Rs 41.04
43. The average age of 10 students in a class increases by 0.4 years when six-year-old boy is replaced by a new boy. The age of the new boy is
(a) 8 years (b) 9 years
(c) 10 years (d) 11 years
44. A man works 8 hours, 9 hours, $7\frac{1}{2}$ hours and $7\frac{1}{2}$ hours on four consecutive days. He is paid at the rate of Rs 8.75 per hour. The average daily earning of the man is
(a) Rs 75 (b) Rs 64
(c) Rs 73 (d) Rs 70
45. The number of hours A, B, and C need to finish a work together if A alone can do it in 6 hours more, B alone in thrice the time and C alone in twice the time, is
(a) 1 hr 10 min (b) 1 hr 7 min
(c) 1 hr 12 min (d) 1 hr 9 min
46. The denominator of a fraction exceeds the numerator by 2. If 5 is added to the numerator, the fraction increases by unity. The fraction is
(a) $\frac{7}{5}$ (b) $\frac{6}{5}$
(c) $\frac{3}{5}$ (d) $\frac{2}{5}$
47. If a sum of Rs 1,960 is divided among A, B and C so that A gets four times as much as B and B half as much as C then B gets
(a) Rs 560 (b) Rs 1,120
(c) Rs 120 (d) Rs 280
48. A stock of food is sufficient for 15 men for 16 days. The food stock will be sufficient for 12 men for
(a) 16 days (b) 18 days
(c) 20 days (d) 22 days
49. One tap fills a tank in 32 minutes and another fills it in 38 minutes and a drain can empty it in 20 minutes. If all these are opened simultaneously the tank will be half filled in
(a) 26 minutes
(b) 27 minutes
(c) 28 minutes
(d) None of the above
50. A ship 66 km from the shore develops a leak which admits $2\frac{1}{2}$ tonnes of water in $5\frac{1}{2}$ minutes; 92 tonnes of water would cause the ship to sink but pumps can throw out 12 tonnes in an hour. The average rate of sailing so that the ship reaches the shore safely is
(a) 6 km/hr
(b) 8 km/hr
(c) 9 km/hr
(d) None of the above
51. After successive discounts of 15% and 4% have been granted the net price of a TV set is Rs 7,344. The listed price is
(a) Rs 8,000 (b) Rs 9,000
(c) Rs 10,000 (d) Rs 10,500
52. Rowing at the rate of 5 km per hour in still water, Rajiv takes three times as much time in going 50 km up the river as in coming 25 km down the river. The river flows at the rate of

- (a) $3\frac{1}{2}$ km/hr
(b) $3\frac{1}{3}$ km/hr
(c) $3\frac{1}{4}$ km/hr
(d) None of the above
53. A hall has dimensions 24m x 8m x 6m. The length of the longest pole which can be accommodated in this hall is
(a) 26 m (b) 28 m
- (c) 30 m (d) 32 m
54. One hundred and forty four oranges are brought for Rs 6 per dozen. Out of these 24 are found to be rotten. The price at which each good orange should be sold in order to give the seller a profit of 25% on the total cost, is
- (a) 70 paise (b) 80 paise
(c) 75 paise (d) Rs 1
55. Fifty men can finish $\frac{1}{6}$ of a work in 4 days. Therefore 40 men can finish the remaining work in
(a) 20 days (b) 25 days
(c) 30 days (d) None of the above

ANSWERS

1. (b) Let the number be x . Then

$$\frac{x+179}{13} = 169 \Rightarrow x+179 = 13 \times 169 = 2197$$
Thus $x = 2197 - 179 = 2018$.
2. (d) Let the three numbers be x, y, z . Then $x+y+z=99$ and $x+5=y-5=5z$. Thus $x=5z-5$, $y=5z+5$. Therefore, $5z-5+5z+5+z=99$ or $11z=99$. This gives $z=9$. Hence, $x=40$, $y=50$, $z=9$.
3. (c) Let the unit digit be x and ten's digit be y . Then $10y+x=3(y+x)+5$. This implies $7y-2x=5$. Also, $10y+x+45=10x+y$, which gives $9x-9y=45$ or $x-y=5$. Thus, $7y-2x=5$ and $x-y=5$ on solving give $x=8$, $y=3$. Hence the number is 38.
4. (a) L.C.M. of 24, 32 and 36 is 288. Thus, the required number is $288+19=307$.
5. (c) Let the three numbers be $a-d, a, a+d$. Then $a-d+a+a+d=18$ $3a=18$ $a=6$. Also, $6-d+2, 6+4, 6+d+11$ are in continued proportion. Thus $(8-d)(17+d)=10^2=100$ $136-9d-d^2=100 \Rightarrow d^2+9d-36=0 \Rightarrow (d+12)(d-3)=0$, $d=-12, 3$. We reject $d=-12$. Therefore the numbers are 3, 6, 9.
6. (a) Let the numbers be $\frac{a}{r}, a, ar$. Then $\frac{a}{r}+a+ar=70$. Also $\frac{4a}{r}+4ar=2(5a) \Rightarrow \frac{4}{r}+4r=10$ $2r^2-5r+2=0 \Rightarrow (2r-1)(r-2) \Rightarrow r=2, \frac{1}{2}$. Thus $2a+a+a/2=70$ which implies $a=20$. Hence, the numbers are 10, 20, 40.
7. (a) Let the numbers be $a-d, a, a+d$. Then $(a-d)+a+(a+d)=15$ or $3a=15$ that is, $a=5$. Also $(a-d)a(a+d)=80$ or $25-d^2=16$. Therefore, $d=\pm 3$. Hence, the numbers are 2, 5, 8.
8. (c) L.C.M. of 12, 15, 20 and 54 is 540. Largest four digit number which is divisible by 540 is $18 \times 540 = 9,720$. Hence, the required number is 9,724.
9. (d) We have $100^2 = 10,000$ which is the first five digit number. Hence the required number is $99^2 = 9,801$.
10. (d) We have $11^5-1=(11-1)(11^4+11^3+11^2+11+1)=10(11^4+11^3+11^2+11+1)$. The last digit of $11^4+11^3+11^2+11+1$ is 5, (1 being the last digit of each number in the sum), hence 11^5-1 is divisible by 50.
11. (b) We have $9^{2n} - (81)^n = \frac{(81)(81)\dots\dots(81)}{n \text{ times}}$
Thus, last digit 9^{2n} is 1, therefore last digit of 9^{2n+1} is 9. Since 9^n is odd, it follows that the last digit of $9^{(2n)^3}$ is 9.
12. (d) Let the number of eggs in the basket be x . Then to the first customer he sells $(\frac{x}{2} + \frac{1}{2})$ eggs. The number of eggs he had after first sale is $x - (\frac{x}{2} + \frac{1}{2}) = \frac{x}{2} - \frac{1}{2}$. To the second customer he sells $\frac{1}{2}(\frac{x}{2} - \frac{1}{2}) + \frac{1}{2}$. Therefore, the number of eggs he had after the second sale is $(\frac{x}{2} - \frac{1}{2}) - [\frac{1}{2}(\frac{x}{2} - \frac{1}{2}) + \frac{1}{2}] = \frac{1}{2}(\frac{x}{2} - \frac{1}{2}) - \frac{1}{2} = \frac{x}{4} - \frac{3}{4}$. After the third sale he had $\frac{x}{4} - \frac{3}{4} - [\frac{1}{2}(\frac{x}{4} - \frac{3}{4}) + \frac{1}{2}] = \frac{x}{8} - \frac{7}{8}$ and after the fourth sale he had $\frac{x}{8} - \frac{7}{8} - \frac{1}{2}[\frac{x}{8} - \frac{7}{8} + \frac{1}{2}] = \frac{x}{16} - \frac{15}{16}$. We must have $\frac{x}{16} - \frac{15}{16} = 0$ which gives $x=15$.
13. (c) We have $31^{11} < 32^{11} = (2^5)^{11} = 2^{55}$ and $17^{14} > 16^{14} = (2^4)^{14} = 2^{56} > 2^{55}$. Hence the required number is 2^{55} .
14. (b) The H.C.F. of 719-5 and 930-6 is 42.
15. (a) We have $a^3-b^3=(a-b)(a^2+b^2+ab)$. Thus,

$$\frac{(0.8)^3-(0.5)^3}{(0.8)^3+(0.8)(0.5)+(0.5)^3} = 0.8 - 0.5 = 0.3$$
16. (b) We have $\sqrt{0.4}=0.63$.
17. (a) Let the number of animals be x and birds be y . Then $x+y=100$ and $4x+2y=280$. Thus $x+y=100$ and $2x+y=140$ which give $x=40$, $y=60$. Hence number of animals is 40.
18. (c) We have $\frac{3+\sqrt{8}}{3-\sqrt{8}} = \frac{(3+\sqrt{8})(3+\sqrt{8})}{(3-\sqrt{8})(3+\sqrt{8})} = \frac{(3+\sqrt{8})^2}{9-8} = (3+\sqrt{8})^2$. Thus, $\sqrt{\frac{3+\sqrt{8}}{3-\sqrt{8}}} = 3 + \sqrt{8} = 3 + 2.828 = 5.828$.
19. (a) Let the numbers be x and y . Then $x+y=16$ and $x^2+y^2=130$. We have $xy = \frac{1}{2}[(x+y)^2 - (x^2+y^2)] = \frac{1}{2}(256 - 130) = \frac{1}{2}(126) = 63$.
20. (c) Let $x = 0.\overline{36} = 0.36\ 36\ 36\ 36\dots\dots$. Therefore, $100x = 36.36\ 36\ 36\ 36\dots\dots$. Thus $99x = 36 \Rightarrow x = 36/99 = 4/11$.
21. (a) Let $x = 0.27927 = 0.279279279279\dots\dots$. $1000x = 279.279279279\dots\dots$. Thus, $999x = 279$ which gives $x = 279/999 = 31/111$.

22. (a) $\frac{100}{125}$ cannot be represented as fraction because it is neither terminating nor a repeating decimal.
23. (a) Let the present age of the father be x and that of son be y . Then $x-5 = 3(y-5)$ and $x+10 = 2(y+10)$. These give, $x-3y = -10$ and $x-2y = 10$. On solving, we obtain $x=50, y=20$.
24. (d) Let the average income in the first eighth month be x . We have $8x-1,275 =$ total income for the first seven months. Thus $8x-1,275 = 7(x-25)$ which gives $x=1,100$.
25. (a) Let the price of sugar be Rs 100 per kg and suppose the housewife was spending Rs 100 per month, so that her consumption was 1 kg. After the increase in price her consumption becomes $\frac{100}{125} = 0.8$ kg. Therefore percentage decrease in her consumption is 20%.
26. (a) Let the listed price be Rs x . Selling price of retailer is Rs $0.95x$. Cost price of retailer is Rs $0.8x$. Therefore, profit of the retailer is Rs $0.15x$. Profit of retailer in percentage is $\frac{0.15x \times 100}{0.8x} = 18.75$.
27. (a) Let these be mixed in the proportion $x : y$, then proportion of milk and water in the resulting mixture is

$$\frac{4x}{9} + \frac{5y}{6} : \frac{5x}{9} + \frac{y}{6} = 5 : 4$$

$$\Rightarrow 4\left(\frac{4x}{9} + \frac{5y}{6}\right) = 5\left(\frac{5x}{9} + \frac{y}{6}\right)$$

$$\Rightarrow \frac{16x}{9} + \frac{20y}{6} = \frac{25x}{9} + \frac{5y}{6}$$

$$\Rightarrow \frac{20y}{6} - \frac{5y}{6} = \frac{25x}{9} - \frac{16x}{9}$$

$$\Rightarrow \frac{15y}{6} = x \Rightarrow x:y = 15:6 = 5:2.$$
28. (a) Let the length of the plot be x metre and its breadth be y metres. Then $xy = 1107$ and $x-3 = y+11$. Thus $x = y+14$. Therefore $(y+14)y = 1107$ which implies $y^2+14y-1107=0 \Rightarrow (y+41)(y-27)=0$. Thus $y=-41$ or 27 . But $y=-41$ is not possible. Hence $y=27$ and so $x=41$.
29. (b) Length of diagonal $= \sqrt{12^2+5^2} = 13$ m
 Total cost of fencing is $13 \times 17 = 221$.
30. (a) Let the length of the hall be x metre, then $2(8x+15x+8 \times 15) = 1068$
 $2(23x+120) = 1068$
 $23x+120 = 534$
 $23x = 414$ $x = 18$.
31. (b) The breadth of the field is $696/29 = 24$ m
 Therefore perimeter of the field is $= 2(29+24) = 106$ m.
32. (d) Area of 4 sq Km is represented by 25 sq cm
 Hence, area of the town is $\frac{5625 \times 4}{25}$ sq km
 $= 900$ sq km.
33. (a) Circumference of the wheel $= 2\pi r$
 $= 2 \times \frac{22}{7} \times \frac{98}{2}$ cm $= 308$ cm $= 3.08$ m
 No. of revolutions required to cover a distance

of 1 km and 540 m $= \frac{1540}{3.08} = 500$

34. (a) Area of the equilateral triangle
 $= \frac{\sqrt{3}}{4} (\text{side})^2 = \frac{\sqrt{3}}{4} (12)^2 = 36\sqrt{3}$ sq cm. Radius of the circle whose area is $36\sqrt{3}$ sq. cm $= \sqrt{\frac{36\sqrt{3}}{\pi}}$
 $= \sqrt{\frac{36 \times 1.732 \times 7}{22}} = \sqrt{19.8393} = 4.46$.
35. (a) Area of the park $= \pi r^2$
 $= \frac{22}{7} \times 69^2 = \frac{22}{7} \times 69 \times 69$
 $= 14963.143$ sq. m $= 1.4963$ hectares.



- Therefore the ratio is 3:2.
37. (c) Let the rate of interest be $r\%$
 Then $P \left(1 + \frac{r}{100}\right)^6 = 2P$
 $\left(1 + \frac{r}{100}\right)^6 = 2$
 $\left(1 + \frac{r}{100}\right)^{18} = 2^3 = 8$
 $P \left(1 + \frac{r}{100}\right)^{18} = 8P$
 Hence the money will become 8 times in 18 years.
38. (b) Let the face value of the bill be Re 1
 Then B.D $= \frac{1 \times 6 \times 4}{100 \times 12} = \frac{1}{50}$
 Present value P of the bill is given by
 $1 = P + \frac{P \times 6 \times 4}{100 \times 12} = P + \frac{P}{50} = \frac{51}{50} P$
 which implies $P = \frac{50}{51}$. Thus true discount $= \frac{50 \times 6 \times 4}{51 \times 100 \times 12} = \frac{1}{51}$
 Banker's gain $= \frac{1}{50} - \frac{1}{51} = \frac{51-50}{51 \times 50}$
 $= \frac{1}{51 \times 50}$. If banker's gain is Re. $\frac{1}{51 \times 50}$
 then value of bill is Re 1, if banker's gain Re $\frac{5}{100}$ then face value of the bill is
 $\text{Rs } \frac{5}{100} \times 51 \times 50 = \text{Rs } 127.50$.
39. (b) Let the amount invested be Rs P and the rate of interest be $r\%$ per annum.
 Then $P \left(1 + \frac{r}{100}\right)^3 = 10,890$
 and $P \left(1 + \frac{r}{100}\right)^5 = 11,979$

$$\text{This implies } 1 + \frac{1}{100} \times \frac{11,979}{10,890} \\ - \frac{11}{10}. \text{ Thus } P \left(\frac{11}{10} \right)^2 = 10,890 \\ = P \times \frac{10,890 \times 100}{121} = 9,000.$$

40. (c) Depreciated value at the end of three years
 $= 9,000 \left(1 - \frac{10}{100} \right)^3$
 $= 9,000 \times \left(\frac{9}{10} \right)^3 = 6,561.$

41. (c) Let the face value of bill be Re 1. Present value P of this bill is given by

$$1 = P + \frac{73 \times 5 \times P}{365 \times 100} = 101 P$$

or $P = \frac{100}{101}$. Banker's discount on the bill is

$$\text{discount} = \frac{1}{101}. \text{ Therefore,}$$

a gain on the bill of Re 1 is

$$\frac{1}{100} - \frac{1}{101} = \frac{1}{100 \times 101}$$

Hence, amount of the given bill is

$$\frac{10}{\frac{1}{100 \times 101}} = 10 \times 100 \times 101 = \text{Rs } 101,000.$$

(b) Cost of 10 kg of the mixture is
 $\text{Rs } (5 \times 32.50 + 4 \times 40 + 36.50) = \text{Rs } 359$
 Cost per kg = Rs 35.9
 Hence, selling price per kg
 $= \text{Rs } \left(35.9 + \frac{35.9 \times 120}{100} \right)$
 $= \text{Rs } \frac{35.9 \times 120}{100} = \text{Rs } 43.08.$

43. (c) Let the age of new boy be x years and the old average be y years

$$\text{Then } \frac{10y - 6 + x}{10} - y = 0.4$$

$$\text{or } x - 6 = 4, \text{ that is } x = 10.$$

44. (d) Total hours worked by the man on 4 days
 $= 8 + 9 + 7\frac{1}{2} + 7\frac{1}{2} = 32 \text{ hours}$
 Total earning = Rs 32 x 8.75
 $= \text{Rs } 280$. Thus average daily income is
 $\text{Rs } 280/4 = \text{Rs } 70.$

45. (c) Suppose A, B and C can finish the work in x hours.

$$\text{Then } \frac{1}{x+6} + \frac{1}{3x} + \frac{1}{2x} = \frac{1}{x}$$

$$\Rightarrow \frac{1}{x+6} - \frac{1}{x} - \frac{1}{2x} - \frac{1}{3x} = \frac{6-3-2}{6x} = \frac{1}{6x} \text{ Thus } \\ 6x = x+6 \text{ or } x = 6/5 = 1 \text{ hr } 12 \text{ minutes.}$$

46. (c) Let the fraction be x/y. Then y - x = 2. Also,
 $\frac{x+5}{y} = \frac{x}{y} + 1$. This gives $\frac{x}{y} + \frac{5}{y} = \frac{x}{y} + 1$ or y = 5

Hence x = 3. Therefore, the fraction is 3/5.

47. (d) Suppose B gets Rs x, then A gets Rs 4x and C gets Rs 2x. Thus $4x + x + 2x = 1960$ or $x = 280.$

48. (c) The stock of food is sufficient for one man for 15 X 16 days. Therefore, it is sufficient for 12 men for $\frac{15 \times 16}{12} = 20$ days.

49. (d) In one minute the part of the tank that can be filled is $\frac{1}{32} + \frac{1}{38} = \frac{16+19}{608} = \frac{35}{608}$ where as part of the tank's capacity that can be drained in one minute is $\frac{1}{20}$. Therefore, part of the tank

that can be filled in one minute is $\frac{35}{608} - \frac{1}{20}$

$$= \frac{175-152}{3040} = \frac{23}{3040}. \text{ Hence, tank can}$$

be filled in $\frac{3040}{23}$ minutes.

50. (c) Water that enters the ship in one minute is $\frac{2}{3} = \frac{9}{22}$ tonnes whereas the water which can be drained out of it in one minute is $\frac{12}{60} = \frac{1}{5}$ tonnes. Thus the weight of the ship

is increasing at the rate of $\frac{9}{22} - \frac{1}{5} =$

$\frac{23}{110}$ tonnes per minute. Therefore the ship will

begin to sink just after $\frac{92}{23/110} = 440$ mins.

Hence, the speed of the ship which will suffice to bring the ship to the shore just before it

begins to sink is $\frac{66 \times 60}{440} \text{ km/hour} = 9 \text{ km/hour.}$

51. (b) Let the price of TV be Rs x. then

$$x \left(1 - \frac{15}{100} \right) \left(1 - \frac{4}{100} \right) = 7344 \text{ or}$$

$$\frac{85 \times 96x}{10000} = 7344 \text{ or } x = \frac{7344 \times 10,000}{85 \times 96} = 9000.$$

52. (d) Let the speed of the river be x km/hour.

$$\text{Then } \frac{50}{x-5} = 3 \left(\frac{25}{x+5} \right) \text{ or } 2(x+5) =$$

$$3(x-5) \text{ or } x = 15.$$

53. (a) The length of the diagonal of the hall is $\sqrt{24^2 + 8^2 + 6^2} = \sqrt{576 + 64 + 36} = \sqrt{676} = 26 \text{ m}$

54. (c) Cost of 120 good oranges is Rs 72

Selling price of one orange is $\frac{72}{120} \times 100$ paise

or 60 paise. In order to get a profit of 25% each orange must be sold at $\frac{60 \times 125}{100} = 75 \text{ p.}$

55. (b) One man can finish 1/6th of the work in 200 days and the entire work in 1200 days.

Therefore, 40 men will finish $\frac{5}{6}$ th of the

work in $\frac{1200}{40} \times \frac{5}{6} = 25$ days.

THE INDIAN RENAISSANCE-2 ITS VISIONARIES

BY ANITA NARAYAN

Raja Rammohun Roy and Swami Dayanand—the universal message and unique contributions of these two messiahs' have been covered in our last issue. Continuing our series on the great lives' that bestrode the 19th century social reform movement. For the benefit of those appearing in the Civil Services (Mains)

SWAMI VIVEKANANDA (1863-1902)

A great patriot and social reformer of modern India. He was the first person to truly proclaim the greatness of India's culture and civilisation and to convey to the world the universal message of the *Vedanta*. He established the Ramakrishna Mission in memory of his guru Sri Ramakrishna Paramhansa (1836-1886) to spread the gospel of his teacher and also to propagate social reform.

Sri Ramakrishna Paramhansa was a *Kali* temple priest at Dakshineswar Calcutta. Although he hardly had any formal education, his spiritual yearning, intense faith and deep understanding of all religions attracted a galaxy of brilliant young men around him, among whom Swami Vivekananda or Narendranath Dutta as he was then called, was the teacher's most beloved disciple.

After his guru's death, Vivekananda traversed the whole country preaching Sri Ramakrishna's message. His brilliance, eloquence, deep spiritual understanding and dynamic personality brought him close to all sections of society—rich and poor, and it is with their support that in 1893 he sailed for America to attend the Parliament of Religions at Chicago. His first speech there took the country by storm. The message of Sri Ramakrishna, as explained by Swami Vivekananda, spread throughout the world and he was adorned with the mantle of India's spiritual ambassador to the West. He journeyed throughout the US and England, and established Ramakrishna missions at many places. His return to India became a national event and he was given a tumultuous welcome. He established the of the Ramakrishna Order at Belur, near Calcutta, which dedicated

itself to the service of the poor.

Vivekananda was strongly opposed to the caste system and severely criticised the prevalent Hindu preoccupation with rituals and superstitions. He strongly believed in free and rational thinking and took inspiration from the Vedanta, which he declared to be the fountainhead of all true knowledge. He wrote four major treatises on Hindu philosophy—*Jnana-Yoga*, *Karma-Yoga* and *Raja-Yoga*, apart from countless letters and lectures. His unique contribution was that he made the youth of India aware of its responsibilities to build a progressive nation.

The Ramakrishna Mission founded by Swami Vivekananda primarily aims at the spiritual uplift of the individual person. It accepts all world religions, as reflected in Sri Ramakrishna's views that though the various religions may express different views, they all expound the same truth. The Ramakrishna Mission also places great emphasis on social service and a number of schools, hospitals, orphanages and libraries are run by it. Further, its dedicated service in times of famines, floods and other calamities is well known. Considering its contributions, the mission's tremendous popularity among the masses is hardly surprising.

JUSTICE RANADE (1842-1901)

The great Maharashtrian social reformer Justice Mahadev Govind Ranade dedicated his entire life to the twin objectives of uplift of women's status and mass education in western India. It was due to Justice Ranade's persistent dedication that the Prarthana Samaj became the foremost organisation of social reform in Maharashtra.

Justice Ranade played a crucial role in the founding of the Widow Remarriage Association in 1861 and the renowned Deccan Education Society begun in 1884, was a product of Ranade's own genius. The basic aim of this society was to educate the youth in a manner that would make them worthy of service to their mother country, an objective which the prevalent method of education did not fulfil. The activities of this society made it possible to begin the Fergusson College and the Willingdon College in Poona and Sangli respectively. The nationalist leader

Gopal Krishna Gokhale, was an active worker of this society.

Justice Ranade possessed an organic view of society and fervently believed that social reform meant the total uplift of society and not just reformatory change in certain areas. Since the various spheres of society—social, economic, political and religious—were inter-related, reform in one sphere automatically meant change in the other areas as well. Further, his philosophy incorporated the rationale that social reform did not simply entail a sudden break with the past but also involved a deep understanding of the existing society so that the direction of change would lead to a stable and progressive society. Thus, he stated, 'The true reformer has not to write on a clean slate. His work is more often to complete the half-written sentence.'

Justice Ranade's work is especially significant for his broadness of vision, accommodating the best of both Indian and Western cultures and his sensitive understanding of societal processes, has given his pioneering work an everlasting appeal.

HENRY VIVIAN DEROZIO (1809-1831)

Derzio was a brilliant and patriotic Anglo-Indian teacher and founder of the Young People's Movement, which drew its inspiration from the French Revolution. He taught at the Hindu College, which he was compelled to leave because of his radical views. Though he died at the young age of 22, he was probably the earliest nationalistic poet of modern India and with his followers known as Derzians, attacked decadent religious customs, championed women's rights and contributed to national consciousness by encouraging public agitation on social and political issues.

However, the Derzians were not always successful in their efforts, as they failed to plan their movements according to the dictates of Indian social reality.

ISHWAR CHANDRA VIDYASAGAR (1820-1891)

One of the towering architects of modern India, Vidyasagar was not simply a great social reformer but an equally great educationist and writer. He was among the earliest to realise the value of education and dedicated his entire life to translate this realisation into reality.

Though born in a poor family, Ishwar Chandra overcame insurmountable odds, educate himself and became a distinguished Sanskrit scholar. His mind was always receptive to new and original ideas.

and it was this quality along with his scholarship which secured for him the coveted post of Principal of the Sanskrit College.

Vidyasagar was a champion of the cause of women's uplift. Amid adverse opposition, he along with J.D. Bhattacharya popularised the concept of western education and in 1949 the Bengali school was opened in Calcutta. Further, at his capacity as Government Inspector of Schools, Vidyasagar was responsible for the opening of 35 girls' schools. Such views were considered out-castes in his time as it was widely believed that once girls were educated they would tyrannize their husbands. Though girls' education was introduced as early as 1821, it was not very popular due to its Christian bias and it was to Vidyasagar's credit that despite the existing prejudices, he was able to make such views more acceptable in his time.

Vidyasagar also waged an incessant battle against child marriage and polygamy. He was appalled by the evil practice in Bengal of marrying young girls to old men, who, upon their aged husbands' death, would become widows at an early age and thereby be forced to lead a life of sorrow and misery. His crowning achievement came in 1855 when despite overwhelming resistance, the Widow Remarriage Act was passed. In 1856, the first Hindu widow remarriage took place in Calcutta under the supervision of Vidyasagar himself. This movement, though it did not gain much popularity, nevertheless drew attention to the racial evil of polygamy.

To bring the benefits of education within the reach of all sections of society, Vidyasagar opened schools where boys of all castes could gain admission, and also enrolled non-Brahmin students to his Sanskrit College. It was he who wrote the first systematic Bengali spelling and grammar book, and also composed a new and more effective method for the learning of Sanskrit. His Sanskrit background notwithstanding, Vidyasagar was receptive to Western ideas and included the study of Western philosophy and applied sciences in his college curriculum.

Despite his innumerable achievements, Vidyasagar always remained modest and simple in his dress and behaviour. He was extremely generous and a great humanitarian filled with infinite compassion for the needy and oppressed. He gave assistance to the renowned nationalist poet in Bengal, Michael Madhusudan Dutt, in his lean days, and the same poet paid him a fitting tribute when he said, "The man I have appealed to has the wisdom and genius of an ancient sage, the courage of an Englishman and the heart of a Bengali mother."

BHIMRAO RAMJI AMBEDKAR (1891-1956)

Despite being born in a poor untouchable Mahar family, Dr B.R. Ambedkar overcame innumerable odds to establish himself in a society ridden with caste prejudices, and his dedication to the cause of the uplift of the depressed classes won him the admiration of all sections of society.

Apart from being a great leader and social reformer, Ambedkar was also an extremely erudite scholar. He was a highly qualified economist and lawyer, and received academic honours from some of the best universities in India, England, the US and Germany. He also taught as a professor in the renowned Sydenham College and Government Law College in Bombay, and published several articles of academic interest in many international journals. It was in recognition of his erudition that he was appointed the Chairman of the Drafting Committee of the Constituent Assembly of India, being widely hailed as the 'architect of India's Constitution', and also became independent India's first Law Minister.

Ambedkar, in spite of his scholarship, was exposed to the humiliating treatment meted out to members of his community. Moved by a burning desire to make people aware of the social evil of untouchability and also to organise the depressed classes into a united organisation to fight for their basic rights, he started the Depressed Classes Mission, which became the first determined attempt to better the lot of the untouchables. Later in 1924, along with Sir Chimanlal Setalwad, he founded the Bahishkrit Hitakarini Sabha (Association For The Welfare Of The Depressed Classes). The activities of this organisation included raising the status of the untouchables to that of human beings, making entry into temples, schools and other public places possible, and also making higher education accessible to the depressed classes. Despite its limitations,

Ambedkar always remained loyal to his community and openly stated that "whatever I have achieved is entirely due to the strength of my community. I am proud to have been born a Harijan." He was also a champion of women's rights.

Later on in his life he became greatly attracted to the teachings of the Buddha and after founding the Bhartiya Bauddha Mahasabha he himself embraced Buddhism. It was this act of his which led several members of the Mahar caste to adopt Buddhism as their religion, thereby renouncing a religion (Hinduism) which had heaped only injustices upon them. Ambedkar's most significant contribution was that he brought the problem of untouchability within the ambit of national consciousness.

SAYYID AHMAD KHAN (1817-1898)

Apart from being the foremost social reformer of the Muslims, Sayyid Ahmad Khan was also a great protagonist of modernisation. He firmly believed in the principle of rationalism and freedom of thought and greatly opposed blind attachment to traditional values, ignorance and fanaticism. To make these ideas more acceptable, he tried to incorporate them in the teachings of the Koran and supported the view that any interpretation of the Koran, which was inconsistent with the principle of scientific reason, was untrue and, therefore, ought to be rejected.

Sayyid Ahmad Khan believed that society could be transformed by adopting the beneficial elements of modern Western education and remained dedicated to this cause all his life. In 1875, to make the fruits of Western education accessible, he opened the Muhammedan Anglo-Oriental College at Aligarh, which later became the Aligarh Muslim University. He also wished to reform Muslim society and strongly opposed the customs of polygamy and easy divorce and was greatly concerned with improving the status of women.

Initially, Sayyid Ahmad Khan entertained very liberal views. He was against the perpetuation of communal feelings of any kind and espoused the doctrine of religious toleration. Indian students of all communities were enrolled in his college and many Hindus were also recruited as teachers. Further, funds for the establishment of his college were contributed by people from all communities. Later, however, his views changed drastically and he became strongly influenced by communalistic and separatist ideas and even discouraged his followers from joining the growing nationalist movement due to it being Hindu dominated.

(Concluded)

A LION'S TALE

Sheer irony! The Indian lion flourishes, not in India but in the Berlin Zoological Park. Ten years ago, this was the second zoo outside India to succeed in breeding the lions. The fact that today the Berlin Park is the largest breeder and distributor of this species speaks volumes about the Indian preservation effort. Over 40 of the Indian lions born there to date have gone to 14 zoos in 10 countries. Incidentally, the 100th Indian lion took birth in the Berlin haven recently and Guy is his name.

SPACE PROBING MANOEUVRES

... in the uncharted areas high above have been facilitated with the introduction of propellants, launch vehicles, space labs and a whole list of other space systems. Going into the orbit with these systems should help one gauge the degree of advancement made in space technology.

BY DR SHIV PRASAD KOSTA
Director Publications & Public Relations Unit, ISRO

Rockets

Rockets can be classified into the following two categories:

Controlled rockets: These rockets can change their natural trajectories using fuel or orienting their subsystems like Fin, etc after lift-off. Some examples of these are—SLV-3, Thor-Dita 2914, Saturn, Vostok, Inter-cosmos, Ariane, etc.

Uncontrolled rockets: These rockets do not have any provision to change their natural trajectories after lift-off. Examples of these types of rockets are—Tipu's rockets, ISRO's RH-125, Menaka, etc.

Rockets are also sometimes named after their fuel contents. The rockets which use solid propellants are called solid propellant rockets, and rockets which use liquid propellants are called liquid propellant rockets. All the rockets work on the principle of Newton's Third Law which states that action and reaction are equal and opposite.

Solid propellants: In the early stages of rocketry, solid propellants were first developed and used. In general, the solid propellant consists of a suitable polymer and aluminium powder as fuel and ammonium perchlorate as oxidiser. Polymers like Polyvinyl Chloride (PVC) or Polybutadiene Acryl Nitrite (PBAN) or Hydroxyl Terminated Polybutadiene (HTPV), along with aluminium powder are used as fuel. In addition Ammonium Perchlorate is used as oxidiser.

Liquid propellants: These are classified as (i) Bipropellants, Monopropellants; (ii) Hypergolic, Non-hypergolic; (iii) Earth storable, Cryogenic. Monopropellants are those which either have fuel and oxidiser elements in themselves or are structurally so configured that on ignition energy, they decompose exothermically into hot gaseous products. In contrast, bipropellants are those that react only when the two propellant elements 'fuel' and 'oxidiser', vapourise mix and burn.

Such bipropellant combinations can be either hypergolic or non-hypergolic. Hypergolic combinations are those in

which the liquid fuel and oxidiser on contact ignite, release energy and burn away into hot gases. As such, propulsion systems, based on such propellant combinations do not need any ignition system. This feature is of great advantage and is used to increase the propulsion system reliability by adopting hypergolic propellant combinations. Non-hypergolic propellants need, of course, an ignition system.

The difference between cryogenic and earth storable propellants arise depending on whether or not the propellants can be stored at room temperatures without any boil off. Cryogenic combinations need, on the other hand extensive insulation.

Satellite Launch Vehicles (Rockets)

A brief account of the satellite launch vehicle (SLV) is provided below to bring out the mission requirements, the physical problems to be taken into account, and the limitations of the launch site in attaining the final satellite orbital conditions:

- In general, a multi-stage rocket system capable of imparting a velocity of about 7.7 km/sec for low earth orbit payloads; typically three to four stages to take advantage of staging;
- This rocket system has to be con-

trained against disturbances originating from thrust misalignments, aerodynamic disturbances, etc and an autopilot is provided on board to stabilise the vehicle along the chosen path till the satellite is injected into orbit;

- A typical SLV trajectory has the following characteristics:
- Vertical ascent for a few seconds;
- Execution of a gravity turn till the vehicle clears the atmosphere;
- Pitch programme execution above the atmosphere to obtain the terminal injection conditions, especially the orbital altitude;
- Coasting up to the orbital altitude and firing of the last stage to inject the required velocity increment in the satellite;
- Execution of stage separation, ignition by on-board sequence.

SLVs, in general, are equipped with on-board guidance systems which continuously provide the orientation, position, velocity and acceleration of the vehicle with reference to a known frame of reference by means of a gyro-stabilised inertial platform carrying high accuracy accelerometers and onboard computers. Guidance computations are carried out using this information continuously and updating the steering commands to the vehicle auto pilot. While this closed loop onboard guidance is a must for many application satellite launching missions, preprogrammed steering commands stored onboard and issued to the auto pilot can provide the orbital injection accuracy required for simpler low earth orbiting missions.

Attainment of orbit for low earth missions require mostly pitch steering with proper launch azimuth plane choice to provide the correct inclination of the orbit; geostationary missions require orbital transfer operations as described below:

Attainment of an inclined parking orbit of about 200 km altitude; Injection into the inclined synchronous transfer orbit of 200 perigee and 36,000 km

TYPICAL LAUNCH VEHICLES WEIGHT ANALYSIS

Launch Vehicle	Total lift-off weight (tons)	Low-Earth Orbit (tons)	Geo-stationary Transfer Orbit (tons)
PROTON (USSR)	2371.14	22	-
ARIANE (ESA)	210.00	-	1.7
ARIANE 2 (ESA)	222.46	-	2.17
ARIANE 3 (ESA)	240.62	-	2.70
PSLV (India)	256.00	1 (to polar sun synchronous orbit)	-
Space Transportation System (USA)	2010.62 (115 miles orbit 28.5° inclination) Shuttle orbiter	29.48	-

apogee at the first equatorial crossing. Plane charging and circularisation at 36,000 km apogee by on-board rocket carried as part of the satellite.

Space Transportation System

A whole new era of space transportation has come into being with the advent of the Space Transportation System (STS) and its ability to transport routinely a variety of payloads to orbit at relatively lower costs. It is designed to reduce the cost and increase the effectiveness of using space for commercial, scientific, national and international needs. Thus the STS objectives can be enumerated as follows:

- Permit an orderly transition.
- Be price competitive.
- Establish user charges on an equitable basis.
- Accommodate all classes of users.
- Foster development of low-cost operation concepts.
- Minimise payload costs.

The STS consists of

- the space shuttle
- spacelab
- interim upper stage (IUS)

With its versatility and reusability, the space shuttle has truly opened the door to the economical routine use of space. The flying or automated satellite will be deployed and recovered from space orbits.

Space Shuttle Systems: The space shuttle flight system consists of:

- Reusable orbiter
- Reusable two solid rocket boosters (SRBs)

- An external liquid propellant tank (ET)

The space shuttle system can place payloads of 29,500 kg into low-earth orbit. Payloads can be placed into high-earth or into lunar or planetary trajectory utilising IUS in conjunction with the shuttle.

The spacelab, manned space laboratory, developed by the European Space Agency, is capable of carrying out scientific applications, technical and technological experiments in low-earth orbit for about a month's duration. The spacelab may be flown as many as 50 times over a 10-year period.

The three-axis stabilised IUS is utilised to place payloads into higher orbits not attainable by shuttle alone. IUS performance characteristics are

Orbit	Stages required	Payload wt (kg)
Geo-synchronous	2	2,270
Sun synchronous	2	1,820
Planetary	4	500

Space Transportation System-STS Parameters

The following are estimated characteristics for STS shuttle flights:

ON ORBIT

	Maximum	Minimum	Typical
Crew	6-7	3	3-4
Duration	30 days	<1 day	3-4 days
Inclination	56°	28-1/2°	30-35°
Altitude	>400 MN	120 NM	150-160 NM
Period (minutes)	>100	89	90
% of time in earth shadow	40%	32%	36-38%
Temperature of nearby structure	200°F	-250°F	+150 to -50°F
Steady-state acceleration	10 ⁻⁶ g	10 ⁻¹⁰ g	10 ⁻⁶ to 10 ⁻⁷ g
Acceleration in manoeuvres	0.4g	-1	TBD

Some flights will have the payload bay generally oriented toward the earth; some, away from the earth; some, a mixture.

Ascent

	Maximum	Typical
Duration of powered flight	12 min.	8 min.
Longitudinal Acceleration	3.7g	3g
Transverse Acceleration	3.9g	1.2g
Angular Acceleration	3rad/sec ²	< 1 rad/sec ²
Noise	{ 145 db 5-10 seconds	130 db
Vibration	{ .1g ² /Hz 20 seconds	.04g/Hz
Temperature of nearby structure	100°F	80-90°F

Pre-launch, the cargo bay atmosphere is filtered air of nitrogen at 70° and less than 50% R.H. The cargo bay doors are opened between one and four hours after lift-off and remain open throughout the mission.

Entry and landing

The cargo bay doors are closed between one and four hours before landing.

During de-orbit and entry, acceleration/vibrations/temperatures are within the values described above for ascent, except that the longitudinal accelerations range between 0 and 1.1g forward.

At touchdown, design accelerations are:

4.2g vertical These include dynamic 1.8g forward transient effects and may 1.2g lateral occur simultaneously.

During a 15-minute period after touchdown, temperature of the nearby structure rises to the order of 180°F. It drops to ambient within another half-hour. During this time, there is forced air circulation at approximately ambient temperature.

(To be continued)

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NEWS CAPSULE

AWARDED

1985 Jawaharlal Nehru Award for strengthening Indo-Soviet friendship to academician V A. Kotelnikov, novelist Chinghiz Aitmatov, oenologist G K. Shirokov and idologist L V. Mitrokhim. The award is sponsored by the Government of India.

Vishwa Gurjari Awards carrying a Rs 1,000 cash prize, to economist I G. Patel, nuclear scientist H N. Sethna, and industrialist Nanubhai Amin for their contribution in their respective fields. Patel will be given the international award while Sethna and Amin will be given the national and state-level awards.

APPOINTED

Air Marshal Man Mohan Singh, Air Officer-in-Charge Personnel at Air Headquarters, as the air officer Commanding-in-Chief of Western Air Command. He replaces Air Chief Marshal D A. La Fontaine, now chief of Air Staff.

K.K. Mathew, former Supreme Court Judge, to head the commission of inquiry constituted by the government to determine the specific Hindi speaking areas of Punjab which shall be transferred to Haryana in lieu of Chandigarh. The Commission will submit its report by Oct 3.

M. Narasimham, former RBI governor, as the Vice President of the Asian Development Bank (ADB) based in Manila.

Satish Dutt Pandey as the Director-General of Punjab police, replacing K.S. Dhilon, who has been reverted to this parent cadre of MP.

ELECTED

J.R. Nirmath, India's permanent representative to the UN Industrial Development Organisation (UNIDO), as one of the three vice presidents of the Vienna-based world body.

VISITED

Julius K. Nyerere, President of Tanzania, on Aug 24 on a four-day visit aimed at building goodwill to Indian leaders before he relinquishes office later this year. Given a Doctor of Laws (LLD) degree by the JNU.

Sridath Rampal, Commonwealth Secretary-General, on Aug 24 on a four-day visit for talks with Indian government leaders on the forthcoming Commonwealth Heads of Government Meeting in the Bahamas.

SCIENCE

Liver cancer cure? Researchers at Johns Hopkins University in Baltimore, USA, have found the first effective treatment for advanced liver cancer which until now has almost always been fatal. Dr Gregory Cort, who headed the research, said the treatment involved injecting antibodies with drugs and radiation to ease the chances of a cure. The treatment which delivers radiation directly to the tumour

in the liver has shrunk tumours by at least 30% and in some cases there was no evidence of cancerous tissue remaining. Exactly how the treatment works is not understood.

Healthy baby rats after space odyssey: The Soviet Union claimed a first for its space programme on Aug 19 by announcing that healthy baby rats have been born on earth after a period of gestation in space. It said rats aboard the Cosmos 1667 space flight launched on Jul 10 later bore healthy strong offspring although a large part of the gestation time was spent in the unusual state of weightlessness. The Cosmos 1667 flight was carried out in cooperation with scientists from the US, France and some East Bloc nations.

NEIGHBOURS

Nepal blasts: Investigations have reportedly revealed that former legislator Raja Ram Prasad Singh was responsible for the June bomb blasts in Nepal. Incidentally Singh's Jan wadi Morcha had claimed responsibility for the blasts which left seven people dead and 30 injured.

DEFENCE

No US camera for Pakistan: The US cancelled last July a deal to supply a sophisticated industrial camera to Pakistan, fearing that the purchase was linked to Islamabad's nuclear weapons plans. The camera, capable of taking pictures at extremely short intervals, was sought by Pakistan for calibrating artillery guns. A slightly more advanced machine is used in designing an atomic bomb when scientists need to know whether nuclear material is compressed properly at the point of detonation. American officials reportedly became concerned when Pakistan named two nuclear experts for training in the use of the camera.

EDUCATION

New Educational Policy: A paper prepared by the Union Education Ministry and presented to Parliament on Aug 20 said the new educational policy should seek to integrate the requirements of universalisation of elementary education, production of sophisticated manpower to deal with new technologies, diversified vocationalisation and the creation of an environment for development through adult and continuing education. Entitled *Challenge Of Education—A Policy Perspective*, it places emphasis on vocational programmes as part of the 10+2 stage of secondary education. Vocationalisation should not be linked only with employment in industry but also with agriculture, the services sector and self-employment. The paper said the system cannot be improved with marginal changes and a "radical transformation" was called for.

On Aug 30 Union Education Minister, K.C. Pant, announced that the national policy on education will be announced by March 1986. Meanwhile, one group will go into resource availability and another into projecting future

manpower needs in the field of science and technology.

Allocation for human resources: The Planning Commission has allocated Rs 1,500 crore for human resources development, a major chunk of which will go towards education. PM Rajiv Gandhi told a conference of state education ministers on Aug 30 that the additional allocation had been made in recognition of the great role of education in developing human resources. In his speech the PM said education should take note of the need for a specialised labour force which would deal with sophisticated technology in 1990 or 2,000.

ENVIRONMENT

India on the road to ecological disaster: The *State Of Environment—1985* report prepared by the Centre for Science and Environment, New Delhi, warns that India could be heading for serious social, economic and ecological disaster if environmental destruction went unchecked. Without proper environment management, India will not even be able to feed the existing population, though its resource base is strong enough to feed three times the number. The country is losing 1.3m hectares of forest land every year, leading to a fuel and fodder famine. The flood-drought cycle was also being accentuated as a result. Not only the genetic diversity but also the genetic quality of Indian crops, plants, trees and animals was being seriously threatened by development programmes promoted under the banner of green, blue and white revolutions. Less than three decades ago, India grew over 30,000 varieties of rice, but by the end of the century there will be no more than 50 varieties.

ECONOMY—National

India's weak financial system: A World Bank study has identified proliferation of financial institutions as a major weakness of the Indian financial system and called for a review of their role. Other weaknesses include low direct mobilisation of savings by development finance institutions, low profitability of the commercial banking system and the high level of overdues, particularly in agricultural finance agencies. The study, entitled *India's Financial System—An Overview Of Its Principal Features*, calls for a careful assessment of the viability of financial institutions to strengthen the system. Most institutions depended heavily on the government for funds instead of mobilising resources from the public. This was because of the combined effect of regulation and lack of appropriate returns to the investors. The low profitability of Indian banks has been traced to loan overdues, overstaffing and low efficiency due to outmoded procedures and high degree of risk absorption. The study said efforts should be directed at improving the financial health of the banking system.

Growth-led, experts versus export-led growth: A report sponsored by the Union Commerce Ministry has recommended that India follow a course of growth-led exports rather than the export-led model of experts.

PERSONS

Shiv Shankar: Visited Bangladesh as India's special envoy to resolve the Ganga waters issue.

Arvind Sanghvi: Head of Gujarat's Cabinet Sub-committee negotiating with striking government employees.

U.N. Bachchawat: Chairman of wage boards for working and non-working journalists.

Mohamed Bensassi: Moroccan special envoy brought King Hassan's message to PM Rajiv Gandhi Aug 6.

Desmond Tutu: South Africa's 1984 Nobel Peace Prize winning social crusader, defied government ban on anti-apartheid speeches at funerals Aug 6.

Ibrahim Shihab: Speaker, Majlis of Maldives, visited India Aug 7, to strengthen bilateral ties.

U Nu Win: The Burmese leader reelected Chairman of the ruling Burma Socialist Programme Party.

Moinuddin Shahbaz: Afghanistan's Deputy Minister for State Planning signed Aug 7 an agreement of cultural exchange with India.

A.W. Clausen: World Bank President toured India to explore the possible role of the Bank in the country's development.

Murlidhar Devdas Antre: Received the 1985 Ramon Magsaysay award for public service.

Harold Watson: US missionary, chosen for this year's Magsaysay award for international understanding.

Lino Borka: Filipino movie director awarded the 1985 Magsaysay award for journalism, literature and creative communication.

Zafarullah Chaudhury: Bangladesh physician recipient of Magsaysay award for community development.

A.N.B. Hazi Zakaria: Malaysian Auditor-General winner of this year's Magsaysay award for distinguished government service.

Nareshwar Dayal: Appointed India's Ambassador to Bhutan.

K.P. Fabian: The new Indian Ambassador to Finland.

S.D. Pandey: Replaced K.S. Dhillon as Director-General of Punjab Police.

P.W. Botha: South African President rejected pleas for equal voting rights to blacks.

Wee Kim Wee: Named President of Singapore by PM Lee Kuan Yew.

S.C. Chandrasekar: Sri Lanka's Tamil Eelam activist successfully sought asylum in India.

Nelson Mandela: Black nationalist leader imprisoned since emergency was imposed on South Africa by the racist regime.

Paulo Muwanga: Former Vice President and Defence Minister of Uganda is its new President.

D.A. Desai: Retired Supreme Court Judge appointed Chief of reconstituted Law Commission.

T.S. Avinashilingam: Veteran Gandhian selected for the 1985 Jamnalal Bajaj award for outstanding contribution in the field of constructive work.

Sanjit Roy: The 1985 Jamnalal Bajaj award winner for application of science and technology for rural development.

Humayun Rashid Chowdhury: Bangladesh Foreign Minister elected President of the UN General Assembly's 41st session.

or growth. The problem of Indian exports is very much a problem of production and it is unrealistic to believe that exports would grow faster than the real national income, says the report prepared by former Commerce Secretary Abid Hussain. Import liberalisation, by itself, is neither necessary nor sufficient to stimulate competition in the domestic economy. A quantum jump in exports is necessary to attain the objective of self reliance. And what is good for exports should be good for domestic production and vice-versa. The report calls for a balance between export promotion and import substitution, with a marginal preference for the export sector. The report also recommends that the real effective exchange rate of the rupee should not be allowed to appreciate and should be maintained at a level considered appropriate for ensuring competitiveness of exports. Many of the recommendations of the report are expected to be accepted by the Centre.

EVENTS—National

Erosion of press freedom? Reported attacks on the press in Tamil Nadu, Punjab, MP, West Bengal, Gujarat, Orissa, and elsewhere, are causing concern to those committed to the ideal of a free press. The Editor's Guild of India, which met in New Delhi on Aug 16, said in a resolution that the attacks included refusal by police to register cases of assault against journalists, police indifference to appeals for protection against anti-social elements, the "hyper sensitivity" of certain legislators towards press comments, and so on. It also rejected recent pronouncements by several ministers, favouring a code of conduct for the press.

ESMA gets extension: The Essential Services Maintenance Act (ESMA) has got a new lease of life, with the Lok Sabha on Aug 19 voting for its extension by five years. Home Minister, S.B. Chavan, said the act will be invoked only as the last resort.

ECONOMY—International

Africa's bleak food outlook: "Africa is the only region in the world that is currently failing to keep food production ahead of population growth," the UN Food and Agricultural Organisation (FAO) says in its 1985 food report. Food production in the world rose by more than 4% last year but in Africa the output was much less, having fallen by 1% a year since 1970. Drought, world recession and civil and military strife had all contributed to the crisis but the root cause lay in structural defects in the African food system, including failure to support rural development. "The situation is likely to get worse before it can get better."

EVENTS—International

South Africa's racist rationale: South African President P.W. Botha, on Aug 15, rejected the one-man, one-vote principle and said there was no alternative to the policy of racial separation in the country. "Destroy white South Africa and our influence and this country will drift into factional strife, chaos and poverty," Botha said in a speech to his National Congress Party. The party has been in office since 1948 and devised the apartheid system that denies the vote to South Africa's 24m blacks. Botha made

PLACES

Helsinki: Finnish capital where foreign ministers of 10 European Common Market countries agreed in a meeting to recall their envoys from South Africa.

Johannesburg: In South Africa where black students burnt President Botha's effigy to protest curbs imposed on funerals of anti-apartheid strike victims.

Penang: The northern state of Malaysia, linked to the mainland by Asia's longest bridge—13.5 km long.

Alexandria: Town on Egypt's border with Libya the scene of joint US-Egypt military manoeuvres.

Port Elizabeth and Uitenhage: The blacks of these eastern South African provinces boycotting white business centres to secure nationalist leaders' release.

Thanjavur: A significant oil find in the Cauvery basin off this Tamil Nadu town.

Rarotonga: Eleven independent island nations, including New Zealand and Australia, met at this island on the Pacific and declared South Pacific "a nuclear free zone".

New Delhi: Will host conference of youth organisations of non-aligned countries.

Durban: South African town, the scene of unending racial fighting that has claimed over 600 lives in the past 11 months.

Casablanca City: In Morocco, 17 representatives of the Arab League held an emergency meeting here in a bid to save the organisation.

Kalpakkam: Second unit of Madras Atomic Power Plant located in this Tamil Nadu town—went critical on Aug 13.

Tokyo: A jumbo crashed in mountains on the outskirts of the Japanese capital killing 521 people.

Bahamas: Islands off the west coast of the US, host of the forthcoming Commonwealth Heads of Government Meeting (CHOGM).

Cork: A memorial service for the Al Jumbo crash victims held in this Irish city.

Luanda: Capital of Angola, venue of the non-aligned countries' ministerial conference.

Sharpur: Punjab village where Sant Harchand Singh Longowal was assassinated

two concessions in his speech: he termed it "outdated and too costly" the system of influx control requiring blacks to secure special permission to work and live near white areas. Botha also pledged 1b rand to improve black cities and townships.

Tanzania's successor-President: Ali Hassan Mwinyi, Tanzania's 65-year-old Vice President, has been named successor to President Julius Nyerere, the country's leader for 24 years. Mwinyi was chosen the presidential candidate at a meeting of the ruling party Chama Cha Mapinduzi (CCM) in Dar-es-Salaam on Aug 15. Nyerere is the third African leader to relinquish power voluntarily.

STATES

Green mantle for Himachal: The Planning Commission has cleared a Himachal Government plan to cover half the state's area with a mantle of green by 2,000 AD. Named "Project Umbrella", the Plan will be assisted by the World Bank with an outlay of Rs. 62 crores. During the current year, the project will cost Rs

and forestry and cover 2,100 hectares of

Andhra Pradesh to reinstate employees: The Supreme Court has ordered the Andhra Pradesh Government to reinstate all employees of the state government who were retired from service on attaining the age of 55 from Feb 28 1983 to Aug 23, 1984. The court ordered that all employees who were not entitled to reinstatement on completing 58 years on or before Oct 31 this year would be eligible for compensation equal to the emoluments they would have received had they been in service. In February 1983, the NTR Ministry reduced the retirement age from 58 to 55 years. In August 1984, the Bhaskar Rao Ministry restored the retirement age to 58 years, which was retained by the NTR Government when it returned to power. Several employees who had been retired following the reduction had then moved the Supreme Court.

Plans for Bhopal: The MP Government has prepared a Rs 322-crore plan to develop Bhopal on the pattern of the Japanese city of Hiroshima. It envisages development of an airport, expansion of the railway station, construction of 11 college buildings, two working women's hostels and a number of welfare and community centres. The plan, part of the state's relief and rehabilitation measures for the benefit of the Bhopal gas disaster victims, envisages the introduction of electric trolley buses for city

CAREER NEWS

Vaidik Research Awards

A greater involvement in the area of industrial research is the need of the hour. The Vaidik Aupyogik Samshodhan Vikas Kendra has instituted Industrial Research Awards, each comprising Rs 25,000 in cash, a citation and a gold medal to be awarded to an individual or a group of individuals, who has made outstanding contributions to the advancement of science and technology leading directly to national prosperity in India.

A special award for women scientists known as SMT carrying a cash prize of Rs 11,001, a citation and a gold medal has also been instituted.

For details please see *The Statesman*, Aug 19, 1985 or write to P O Box No 9037, Patel Vanka, Western Express Highway Goregaon (East), Bombay-400063.

Probationary Officers

Opportunities for those eager to become probationary officers in associate banks of State Bank of India. The Central Recruitment Board (State Bank Group) has invited applications from Indian aspirants for further details please see *The Hindustan Times*, Sep 10 1985.

INBA Scholarships

The Indian Naval Benevolent Association (INBA) invites applications from the children of retired and serving naval personnel for the award of 270 scholarships to post class XII education. The scholarships range from Rs 450 to Rs 1,500 p.a. for day scholars and boarders respectively.

For further details write to the Secretary, INBA Naval Headquarters, New Delhi and Zilla Sank Boards. Last date for receipt of completed forms is Sep 30 1985.

transport, development of recreational and health care facilities. It will be implemented in five years' time.

Clean bill to Bhajan Lal: Haryana CM Bhajan Lal has been cleared of charges of corruption, nepotism and misuse of office. Justice Jaswant Singh, former Supreme Court Judge who examined the charges, concluded that there was no *prima facie* case against Bhajan Lal and his close relatives. Opposition leaders

had submitted a 42-page memorandum to the PM on Jul 4 accusing Bhajan Lal of turning the official apparatus into a 'money minting industry'.

DIED

Justice Murtaza Fazal Ali, 64, judge of the Supreme Court on Aug 19 in New Delhi of a heart attack. A P

Answers to

TEST YOUR WORD POWER

amenities: C things circumstances surroundings that make life easy or pleasant. If there is one person in government who is today at the bottom of the scale in wages, amenities and excessive duties, it is the police constable.

blight: D evil influence. As far as the Americans are concerned there seems to be a blight on the French Open men's singles title for two decades: no US player has been able to claim the crown.

choke: A to block up fill partly or completely something that is usually clear. The Ganga, a symbol of purity and an inspiration to millions, is today being choked by the tons of dangerous chemicals and organic wastes which are emptied into it everyday.

diminutive: B unusually small. Despite the vivid images relayed by the Viking landers in the mid-1970s, Mars to most people remains a planet of the imagination as unlikely a home for humans as it is for diminutive green men.

elate: A to make happy raise the spirits of stimulate. French President Francois Mitterand has not yet taken to running through the streets of Paris but he has reason enough to be elated over the progress of his proposed Eureka project, a transnational joint venture that he hopes will usher in a golden era in West European research and technology.

espouse: A to support (a cause, theory, etc). The African national Congress, which espouses socialism, accuses Zulu chief Gatsha Buthelezi of being a capitalist.

forum: C any place for public discussion. Imaginatively conceived and handled, *Janvani* has been a forum where the electorate can register their complaints about administrative lacunae and governmental corruption.

furor: D a fit of great rage maniacal fury. Any radical analysis of Bhagavad-Gita much less criticism invariably creates a furor among outraged Hindus who perceive in this a blasphemy of the holy text.

hoax: B an act intended to dupe or trick, imposture, deceptive or mischievous trick played on somebody for a joke. Sensational stories regarding the blinding of 60 children in a remote Kashmir village in the recent past turned out to be something of a hoax.

hush: A to sing with closed lips. The (American) generation that could hum TV jingles before it could turn the national anthem and *Swade* never to trust anyone over 30 is becoming middle-aged.

intransigent: C uncompromising specially in politics, refusing to abandon an extreme position or attitude. The United Democratic Front

- 12 **intrepid:** B fearless, undaunted, unusually brave. The bleak performance of the airline industry in the recent past has ruffled even the most intrepid lars and now is raising disturbing issues about flight overcrowding and inattention to safety.
- 13 **pelt:** A to strike with missiles hurt throw. Trouble erupted at Salt Lake Stadium (Calcutta) when Mohammedan Sporting officials were pelted with stones by East Bengal supporters after their team scored the equaliser in the second half.
- 14 **perpetrate:** A to commit a crime. In rural India the rigid caste and feudal structure continues to perpetrate atrocities on anyone who dares to defy it.
- 15 **prosecute:** A to start legal proceedings against to try by law. The US does not have an extradition treaty with Lebanon but under international law Lebanon is theoretically obliged to prosecute hijackers or turn them over for extradition.
- 16 **quadruple:** A to make or become four times as much. Scarcely a dozen years ago in the short span of two months the Organisation of Petroleum Exporting Countries arrogantly assaulted the industrialised world by quadrupling oil prices to \$11.65 per barrel.
- 17 **revere:** B enthusiastic praise. Celebrated novelist R K Narayan's latest book, a collection of short stories *Under The Banyan Tree*, has received rave reviews in the international press.
- 18 **rubble:** B bits of broken stone, rock or brickwork that to which buildings are reduced when destroyed. On an August morning in 1945 time stopped for Hiroshima at 8.16—the moment at which the first atomic bomb reduced a city to rubble and made all humankind endangered species.
- 19 **serf:** A treated almost like a slave, one class of labourers bound to land. The *Madiga* (Hamars) of Karamchedu were not killed because they were *Hajians* but because they were landless serfs who had dared to protest for their rights to break out of the enforced subservience.
- 20 **skirmish:** C small battle, short argument or contest of wit, fight between small parties, raked with a long tradition of protest by South Korean student activists that have routinely provoked skirmishes with police, the government or President Chun Doo Hwan last year embarked on a resolute confrontational course.

Vocabulary Ratings:

- 20-18 correct
- 17-15 correct
- 14-12 correct

EXERCISES
ANSWERS
QUESTIONS

THE FREEDOM MOVEMENT

(Continued from page 17)

came back to active politics and took the reins of the Congress at the Calcutta session in December 1928. At the historic Lahore session in December 1929, the Congress passed a resolution declaring *Purna Swaraj* (complete independence) the ultimate objective. A newly adopted tri-colour flag was hoisted on Dec 31, 1929. Jan 26 was declared Independence Day in 1930 and the day was to be celebrated every year. Civil disobedience movement was to be launched.

On Mar 12, 1930, Gandhiji launched the second civil disobedience with his famous Dandi March; he and 78 chosen followers walked a distance of 320 kms from Sabarmati to Dandi, a village on the Gujarat sea-coast to make salt to violate salt law. This symbolised India's refusal to live under the British Raj. The movement, brutally suppressed by the government, spread like wild fire. The Congress was declared illegal, mass arrests were made and repression was let loose.

The Britishers summoned a Round Table Conference (RTC) in London in 1930. The Congress boycotted it. Realising that a Conference on India without Congress was meaningless, the government became conciliatory and negotiated with the Congress to attend the RTC. Lord Irwin and Gandhiji negotiated a settlement in March 1931 known as the Gandhi-Irwin Pact, making Congress agreeable to attend the RTC. According to the Pact, the government would release all political prisoners who had remained non-violent and the Congress would suspend the civil disobedience movement. Though many Congressmen opposed the Pact, Gandhiji persuaded the Congress to accept it in the Karachi session. The session was also important for resolutions on Fundamental rights and National Economic Programmes.

Gandhiji left for England in September 1931 to attend the second RTC. The British Government refused to accede to the major Congress demand for the immediate grant of Dominion status. On his return, Gandhiji resumed the civil disobedience movement. The government was able to crush the movement as Indian leaders were divided on communal and other issues. The movement gradually waned and the Congress officially suspended it in May 1932. It was withdrawn a year later. Gandhiji once again pulled himself out from active politics. Frustration and depression set in causing a fall in the Congress membership to less than five lakhs.

The third RTC in November 1932 in London was held when the Congress was in the thick of the civil disobedience movement. The Congress, therefore, did not participate in the conference. Its discussion eventually led to the Government of India Act 1935, which provided for a federal structure of the government. Communal representation continued. The Congress considered the Act as "totally disappointing". The federal aspect of the Act was never introduced but the provincial part

was put into operation. The Congress participated in elections, though it opposed the Act, winning overwhelming majorities in most of the provinces. Congress ministries were formed in July 1933 in seven out of 11 provinces. Coalition ministries were formed in two other provinces. Only Bengal and Punjab had non-Congress ministries. Congress ministries did commendable work but could not change the basic imperial character of the British administration.

Socialist ideas rapidly grew within and outside the Congress in the 1930s for which Jawaharlal Nehru and Subhash Chandra Bose were particularly responsible. In 1938, Bose was re-elected the Congress President despite opposition by Gandhiji. He, however, resigned as he found that the Working Committee, dominated by Gandhiji, did not allow him to work. He and his left-wing followers founded the Forward Block.

Since 1929, it had become a regular feature at Congress sessions to record its view on world events. It condemned Fascism in Italy and Nazism in Germany, and expressed its support to Spain, Czechoslovakia and China when these countries were attacked. Indians were asked to boycott Japanese goods when Japan attacked China in 1937. The Congress also supported the freedom movements in the native states.

When World War II broke out, the Congress publicly declared that it was against Fascism, Nazism and militarism. The Government of India, however, joined the war without consulting the INC or the elected members of the Central Legislature. Congress was willing to support the forces of democracy but not the Britishers. It, therefore, demanded that India be declared free (or at best power be put in Indian hands) before it could participate in the war. The British Government refused to accept this demand and the Congress asked its ministers to resign. In October 1940, Gandhiji gave a call for a limited *satyagraha* as a mass upheaval would embarrass the British Government.

Germany after capturing Poland, Belgium, Holland, Norway and France attacked the Soviet Union on Jun 22, 1941. Japan attacked the USA on Dec 7, 1941 at Pearl Harbour and quickly overran Philippines, Indo-China, Indonesia, Malaya and Burma. It occupied Rangoon in March 1942. Thus war was at India's door step. The British Government sought the support of the Indians in its war-effort. A mission headed by a Cabinet Minister, Sir Stafford Cripps, was sent to India. Cripps declared that the aim of the British policy in India was "the earliest possible realisation of self-government". Negotiations with the Congress, however, failed because it wanted immediate transfer of effective power for which the British Government was not ready. The failure of the Cripps Mission embittered the people of India. The Congress then decided to take steps to compel the Britishers to accept its demands. The AICC met at Bombay on Aug 8, 1942 and passed the famous 'Quit

India' Resolution. It proposed a non-violent mass struggle under Gandhiji's leadership to achieve this aim. But before the Congress could start such a movement, the government arrested Congress leaders including Gandhiji. The Congress was declared illegal. The 1942 movement was crushed ruthlessly. Repression knew no bounds. The press was strangled. The government succeeded and there was hardly any political activity till the war ended in 1945.

There was, however, a development outside India. Bose had escaped from India in March 1941 with a view to freeing India with the help of Britain's enemies. He went to Germany and then in a submarine to Japan. He formed the Indian National Army (INA) out of the prisoners-of-war of the British Indian Army and also of the Indians living in South East Asia. The INA had almost reached the borders of the eastern India. When Japan surrendered to the USA, INA was forced to withdraw. Bose, while going to Tokyo, died in an air crash. The officers and men of INA were captured. The three Generals of the INA Shah Nawaz, Gurdial Singh Dhillon and Prem Sehgal, who had earlier been officers in the British Indian Army, were put to trial for treason in the famous Red Fort of Delhi. The British Government because of popular demand had to withdraw its cases.

The British attitude changed after the war. Several factors were responsible. War had changed the balance of power in the world. The US and the USSR emerged as superpowers, both supporting India's freedom. Britain, shattered militarily and economically, was relegated to an inferior position. It also could no longer depend on the Indian army. The Congress had spread political consciousness to such an extent that Britain could not effectively rule India. The government in England also changed. Britain decided that it was better to transfer power, peacefully and amicably, to the Indians. This could ensure safety to British interests in India. The vast India could also remain a source of raw materials and a market for finished goods.

A Cabinet Mission came in March 1946 to negotiate with the Indian leaders the terms for the transfer of power. The negotiation dragged on. The Muslim League was adamant on claiming Pakistan and Jinnah insisted on the 'two-nation theory'. The League resorted to 'direct action' and communal riots broke out in many parts of the country. Ultimately, the Congress agreed to the partition but not to the 'two-nation theory'. India became free on Aug 15, 1947 but not in one piece. Gandhiji was isolated and felt disillusioned.

The Congress has been ruling India since independence except for a brief period. It not only led India's struggle for independence but has also been an effective instrument for developing India on secular, socialistic and democratic lines. It has also served as a beacon light for freedom struggles in other Asian and African countries. Few political parties have such a record in human history.

(For personalities, look up our November issue.)

CURRENT EVENTS-NATIONAL

(Continued from page 21)

Keeping in view India's dwindling concessional credit—the IDA credit has declined from a peak of US \$1.6b in 1980-81 to \$850m in 1984-85, even as average interest rose from 2.4% in 1970 to 5% in 1983—Clausen has assured India of a greater access to loans from the International Bank of Reconstruction and Development (IBRD) which would be expanding its lending programmes. The IBRD assistance which stood at US \$11.4b in June 1985; is expected to go up by 10% by June 1986 and by 1987 its lending is expected to reach \$14b to \$15b. In the meantime its lending rate has been brought down to 8.82% from 9.89%.

The International Finance Corporation (IFC), also a World Bank affiliate, which lends directly to the private sector, has embarked on a five-year expansion programme. And the doubling of the US \$1.3b to IFC's capital will ensure the Indian private sector's easy access to IFC funds. Three possible areas for IFC involvement are business ventures where technological innovation or transfer and development are important; mobilising foreign exchange, financing of large projects and helping the private financial sector through investment in leasing, housing finance, etc.

Nevertheless the fact remains that commercial borrowings have floating rates of interest which makes the borrower vulnerable to any increase in debt servicing when interest rates rise due to international monetary fluctuations. This leaves India with little choice but to improve exports to the tune of \$91.1b over the next five years as against \$58.4b during the Sixth Plan period—an uphill task, indeed!

EDUCATION POLICY

A NEW LOOK

In 1911, the first major official document on education was presented. Since then, there have been three more documents. After Independence three education commissions—Radhakrishnan Commission on university education, Mudaliar Commission on secondary education and Kothari Commission on total education—were appointed. Parliament also took initiative to constitute a Parliamentary Committee. All this led to the 1968 national education policy.

The policy sought to relate the education system more closely to the lives of the people, provide expanded opportunities, initiate sustained effort to improve quality of education at all stages, emphasise development of science and technology and cultivate moral and social values. The basic objective of the policy was to create an ethos that would produce cultured young men and women committed to national service and development.

The policy achieved limited success. Owing to high cost of implementation the goals were often postponed. The social cost of a no-change option however, was seldom taken into account. Excessive emphasis was laid on degrees and rote-learning. Examinations and grades lost much of their credibility and education became dysfunctional. There was a progressive erosion of values.

The new government realised that complete reorganisation of education was needed if its major social and economic goals were to be achieved.

A high-powered panel was set up by PM Rajiv Gandhi in early February this year to suggest a new education policy. On the PM's initiative, the Union Education Minister, K.C. Pant, undertook an exercise and published a

document entitled *Challenge of Education: A Policy Perspective* on Aug 20. The document provides an overview of the present quantitative and qualitative aspects of elementary, secondary, vocational, higher, technical, adult and teachers education along with statutory and policy alternatives. The document suggests four main objectives for the education policy. These are: access, equity and minimum threshold; social relevance; diversification and quality; and methodology and management.

The paper suggests that a multi-pronged strategy should be adopted for the new policy which should integrate the requirements of the universalisation of elementary education, produce sophisticated manpower to deal creatively with new techniques, diversify vocationalisation and create an overall environment for development through adult and continuing education. The high points of the policy are:-

(i) The present 10+2+3 system should be changed in such a way that vocationalisation begins at class VI level. A holistic model should be adopted with three year pre-primary education. The child should get primary education upto class V at the same location. Further continuation should be decided after a public examination. (ii) Vocationalisation should start earlier than the 10+2 stage. It can be started after a public examination even before class VI. It should be linked, besides industries, with agriculture and the tertiary sector. Special emphasis should be given to self-employment. (iii) Higher education should not be universalised. It should be available to those who have academic aptitudes. The entry to higher education may be restructured by insisting on a scholastic aptitude test before admissions to universities and by delinking jobs from degrees. (iv) Efforts should be made to improve the relevance and quality of higher education. Several ways have been suggested to achieve this. The colleges may not be affiliated to universities but may be granted autonomy. Continuing evaluation system may be adopted. The courses in humanities, sciences and arts

SEVENTH PLAN

WHAT THE FUTURE HOLDS

The plan document for the Seventh Plan is in its final stages now. In order to meet the Plan resources an additional Rs 2,000 crores will have to be raised during the next five years through higher direct taxes. The biggest increase in investment outlays have been reserved for areas such as social services, forestry, special area programmes, development of backward areas, family planning and nutrition. Family planning alone gets a record 135% and nutrition a mammoth 335% increase in outlay. Additional resources will also be diverted to comparatively neglected sectors like railways, power and oil.

The Seventh Plan also aims at decreasing the dependence on public sector outlay. It will now constitute no more than 48% of the total investment in sharp contrast to 60% during the Third and Fourth Plans and 53% in the Sixth Plan.

The Plan document envisages an overall growth target of 5% for the next five years and the target for industry, a slightly optimistic 8%. It proposes a total investment of Rs 3,22,386 crores and projects ambitious double digit growth rates for newsprint, sugar, aluminium, cement, fertilisers, polyester and viscose staple fibre and filament yarn, commercial vehicles, machine tools, electricity generation and wide range of chemical products. It also forecasts a drop in the percentage of population below the poverty line from 36.9% last year to 25.8% annually.

Still the document predicts an overall strain on Indian cities, as almost 60% of population growth between now and the year 2000 will be concentrated in cities.

J.S.

may be restructured on a modular pattern with much greater inbuilt flexibility to establish close links with the student's interests, society and the world at large. Colleges based on traditional patterns should not be allowed to be established. Only those colleges may be set up which have vocational bias and are linked with identified multi-disciplinary tasks, offering integrated courses in agriculture, urban planning, public management and office management. (v) Suitable voluntary agencies should be entrusted the responsibility for formal and non-formal education. (vi) The education may be made more expensive. Higher education should not be subsidised by the states.

The policy background has not been able to bring out the real issues. Probably it has been left to the nation to formulate and debate the basic issues. The debate in the following months should concentrate on the following issues:

(a) What should be the basic objective of education—training of the mind or preparing an individual only for the job market?

(b) What sort of value system should education cultivate in a person?

(c) Whose responsibility should education be—the state government's, the Union Government's or the private organisations?

(d) Who should bear the cost of education—the tax payer, or the person who is receiving education?

(e) What should the link between education and employment be?

(f) What should the medium of instruction at different levels of education be?

However sound the education policy may be, its ultimate success depends upon the availability of dedicated teachers, conscientious students, responsible parents and honest bureaucrats. *Readers are invited to write on the above issues which would be forwarded to the Ministry of Education.*

Look for statistics on state of education in India in our *General Knowledge* feature (November issue).

GEET SETHI

TOP OF THE TABLE

BY V. KRISHNASWAMY

Youth triumphed over experience. Tall and handsome, Geet Sethi, barely 24 years of age, crowned himself the world amateur champion in billiards, outclassing Bob Marshall, who in his career spanning more than twice Sethi's age has grabbed the same Arthur Walker Trophy no less than four times. In fact, the last time Marshall had his name inscribed on the trophy, Sethi was a one-year-old toddler.

The success story of Sethi is one of determination, dedication and genius. But as compared to most other champions of the game, the nuances of billiards seem to come more naturally to him. He had picked up a cue for the first time in his life in 1974 and within two years he was the national junior champion.

Curiosity stirred up Sethi to take up billiards. A member of the Ahmedabad Gymkhana, located very close to his house, he used to accompany his elder brother for swimming. While the younger Sethi swam, the older one played billiards. And the club rules did not permit anyone below 16 to play billiards. Geet was confined to just observing. Then came a change in club rules and Sethi's future took a new turn. And once he started on the game, there was no turning back. "The game is so very interesting and addictive that I could not bear to give it up," recalled Sethi.

In a country where parents seem to place paramount importance on academics, Sethi was extremely lucky to have sports loving parents. "My father told me that I could play as much as I wanted as long as I maintained a first division. That I did. So there was no problem whatsoever," said a smiling Sethi.

After his first win in the junior nationals at Jamshedpur in 1976, Sethi went through a slump for a couple of years before winning the junior crown again in 1978. But this time he kept possession of the crown till 1981 when he finally moved out of the junior ranks.

In 1981 came the first senior title. In that same year he had done the double of billiards and snooker among juniors. And this year Sethi grabbed a double in the seniors too.

Coming to his adroitness at both the table games, Sethi said, "I manage to concentrate on either as and according to the demands." What about the preparations for the coming World Snooker Championships to be held in Blackpool in November? "From now on I am going to play only snooker till November. I don't think I should have any problems."

And if he does it even there, Sethi will become the only player ever to win both the billiards and snooker championships of the world in the same year. It shall be yet another feather in his already well-decorated cap.

Though Sethi had taken part in some international tournaments in England and Scotland in both billiards and snooker, his first inter-

national tournament where he represented India was the Asian Snooker Championships in Singapore this year. And would you believe it, it was a miserable tournament for young Sethi. He just could not find his touch and failed to make even the semi-final grade.

Came the world championships and Sethi was back to his winning ways. Before the start of the world meet in Delhi, everyone accepted that there were as many as five players, holder Michael Ferreira, Subhash Agrawal, Latif Amir Bux of Pakistan, Marshall and Sethi, who had a chance on paper of winning the title. But only the first three were given a realistic chance. Marshall was after all 75 and returning to the billiards scene after a lapse of 23 years and Sethi was playing his first world championship. Moreover, maturity is a much-called for factor in this game which can at times become monotonous for not only the watcher but also the player. But as the tournament progressed, pundits were proved wrong. Marshall and Sethi were a cut above the rest. And they met in the final.

At the league stage the talking points were the consistency of the four-times champion Marshall, the unimpressive showing of the reigning champion, Ferreira and the record-breaking spree of Agrawal. But at the same time Sethi was methodically slicing through his rivals. And then came the clash between Sethi and Agrawal. "A case of poor play making a good match" is what Sethi said about the match.

But Sethi came through with flying colours. Trailing for most of the match, Sethi never crumbled under pressure. Agrawal bungled at crucial moments and on the penultimate visit to the table he left Sethi on with all three balls on the table. A 68 at this stage saw Sethi through. And then came a bonecrusher against Ferreira in the semi-finals. Midway through the six-hour match, Sethi was in arrears by almost 800 points. He not only pulled a level but went on to win by nearly 100 points. These two matches made everyone sit up. For one so young, Sethi had displayed astonishing maturity and will to fight back from almost an impossible situation. Winning, as he said in an interview to *The Telegraph*, depends a lot on the mind. You have to keep thinking that you have to do it. It is his determination that ultimately prevailed over that of the others.

From the other side, Marshall moved up unbeaten, pushing aside Latif Bux, Ferreira and then Agrawal. And so the stage was set. Marshall, with steel plates and pins in his body, following an operation for arthritis, took on Sethi. During the first session the septuagenarian had things going his way. But Sethi reversed the trend in the second session. And by the third Sethi was up by fantastic margins to reduce the final session to mere formality.

Sethi in the process of his victory had set up a series of firsts. He became the only unseeded player to win the world crown and also the first to do it on his debut. Not only that, he also had the highest break of the tournament and also the fastest one. If Boris Becker is West Germany's pride, Sethi is our very own.

Winning depends a lot on the mind. You have to keep thinking that you have

BORG VS. BECKER HURRICANE ON COURT

BY NOVY KAPADIA

Noted 18th century critic Samuel Johnson once said, "The true genius is a mind of large general powers, accidentally determined to some particular direction." This definition of genius could aptly be applied to the new tennis prodigy Boris Becker. The incredible self-confidence, strength of mind, determination and will to succeed that Becker displayed in becoming the first-ever unseeded player to win the men's singles title at Wimbledon truly links him to the realms of genius. Such is the exacting atmosphere and tension of international sport and tennis in particular that triumph and supremacy is a matter of the supreme mind overcoming all odds.

Fascinatingly, the road to success for this muscular but athletic red-headed 17-year-old German teenager has been beset with obstacles. Till 1984, it was the ice-cool Swede, the 19-year-old Stefan Edberg, who was considered the tennis prodigy. Edberg has been the only winner of the coveted junior grand slam (French, Wimbledon, US and Australian titles in a calendar year). Becker was impressive on the junior circuit in 1984 winning tournament titles at Monte Carlo, Portland and the Young Masters at Birmingham. But his record was not as impressive as Edberg's and tennis is littered with several promising juniors who floundered as they moved up into the senior ranks (India's Ramesh Krishnan is a prime example, he never really fulfilled his potential as a junior). The genius of Becker is that in the space of a calendar year he has not only left Edberg far behind but has made that quantum jump with no apparent adjustment trauma.

Six months younger than the junior Wimbledon champion, Leonardo Lavelle of Mexico, not old enough to drive or vote or drink in pubs, Becker ploughed his way through a 128-player minefield to become the first ever German to win the Wimbledon crown. In beating Kevin Curren 6-3, 6-7, 7-6, 6-4, 'Boom Boom' Becker, as he is popularly known for his athleticism and powerful serves, became also the youngest player ever to win the King George V Cup in the 108-year-old history of the All England Lawn Tennis Championships, tennis' unofficial world championships. Becker has made tennis nay sporting history on the hallowed centre court and revered 'strawberries and cream' atmosphere of Wimbledon. Eulogistic tributes have come the world over. A London paper hailed him as Germany's 'Boy Wunder'. In the run-up to the final, a Becker fever swept the Federal Republic of Germany. The media gave extensive coverage to Wimbledon for once. Even the German TV news normally telecast at 8 p.m., was delayed on account of his semi-final match against Anders Jarryd. In Dortmund tennis fans renamed a Rote-Becker-Strasse, 'Boris-Becker-Strasse'. Bonn Head of State Richard von Weizsacker cabled congratulations to London SW19 two minutes after the final was over. Recent surveys have found that out of every five baby boys one is being christened Boris. Becker's face, hardly

familiar 10 weeks ago, is now better known to more West Germans than that of Chancellor Helmut Kohl. Tickets for the Davis Cup semi-final tie between West Germany and Czechoslovakia, to be played in Frankfurt from Oct 4-6, were sold out within 10 minutes. And within the first hour, there were 25,000 applications for seats in a 9,000-capacity stadium. Becker mania has created a boom in the tennis industry in Germany. People have gone into such a 'tizz' over Becker that even the tennis court in Frankfurt is getting special treatment. A special carpet court is being laid out for the match.

Becker has rewritten the record books. At the start of 1984 he was ranked 750 in the Association of Tennis Professionals rankings but ended the year at No. 65. He was ranked 29 before Wimbledon. It is now No. 8. What has been the motivation for this German prodigy's success? A fierce commitment coupled with characteristic Teutonic determination to be supreme. Expressing such a desire with lucid candour, Becker said, "To be successful in tennis, to be No. 1, you have to be not normal. Look at Borg or McEnroe, they are not normal. That is how I would like to be. Normal will not make you No. 1."

What does being not normal imply? A spartan existence, devoid of the normal pleasures of an adolescent. When he is not playing or practising tennis Becker is not found huddled in the players bar but in a marquee with coach Gunther Bosch engrossed in a game of chess. "I play chess because it tests my powers of concentration. I have found this helps me on a tennis court as well."

Even leisure for Becker is functional. It must help him in his odyssey to be the supreme tennis player of the world. Truly it is said that sport has a way of reflecting social or racial order or psychology. Becker is an expression of such a phenomenon, Teutonic diligence plus single-minded devotion. He is the small-town boy who achieved fame and social mobility rapidly. Becker hails from Leimen, a small town near Heidelberg in Bavaria. His father Karl Heinz is the president of the local tennis club and taught young Boris the rudiments of the game. At the age of seven, three years after he first picked up a racket, Boris won his first tournament.

Like most European boys he also played football. He was a big dangerous centre-forward and was offered schoolboy trials at the age of 12 with the club he still supports, Bayern Munich. Becker took no half measures. At the plea of his father at the tender age of 12 he had to choose a career of either tennis or football. There was no Hamlet-like procrastination in his decision. He quit football totally and devoted himself entirely to tennis. His success in the tennis world is a reflection of his genius which basically means an infinite capacity for taking pains. Becker's is the classic case of the loneliness of the successful man. "I suppose I am a bit of a loner in that I don't have many friends in the circuit. But then you have to be single-minded to get to the top." Single-minded he certainly is. In his spare time there is no withering away of energy in frenetic pursuits. Most of his spare time is spent alone, reading or listening to 'heavy rock' on his stereo and reading books on politics and light fiction in both German and English.

As a human being Becker is extraordinary



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with precocious talent and powers of concentration. How is he rated as a tennis player? His manager, the former Rumanian Davis Cup star Ion Tiriac, known to be a tough taskmaster, has this to say of Becker, "I believe there is only one way to find out how good or bad a player is. You have to run them through fire. Becker did just that and reduced his opponents at Wimbledon to ashes."

Dan Maskell, the voice of tennis on the BBC television, says of Becker: "He is a remarkable athlete who has the talent as well as the courage to become one of the truly great players. Watching Becker play I am reminded of a young Lew Hoad. Like Lew Hoad, Becker also intimidates his opponents by sheer size and the force of his play. He has the same 'court presence' that Hoad had."

His game revolves on a never-say-die attitude as he scurries, scampers, stretches and dives to retrieve balls from impossible angles. With his anticipatory talent and excellent overhead shots, Becker often goes for and succeeds with shots seemingly impossible for lesser mortals. This is another facet of his game, which indicates sheer genius for as noted novelist James Joyce said, "A man of genius makes no mistakes. His errors are volitional and

are the portals of discovery."

Becker's fairy tale success at Wimbledon had a happy ending for an unexpected Englishman also. This English punter had wagered ten thousand British pounds on the young German to win even before the tournament got underway. Odds were 20 to one. Becker won the title and got 130,000 pounds as prize money but the punter was richer by 200,000 pounds. However, winning Wimbledon is like the opening of a gold mine for Becker. It is estimated that he will make one million pounds by virtue of the numerous endorsements that are now coming his way.

Like all great personalities, Boris Becker evokes contrary responses. Some call him a determined but lucky player whereas other critics rave about him. They say he is "as ferocious a fighter as Jimmy Connors; tactically better equipped than Bjorn Borg; more flamboyantly talented than John McEnroe". Time alone will decide whether Becker is destined to be one of the game's immortals or just a very good player (no average player wins Wimbledon as a teenager). One thing is certain, however, that blessed by an even temperament and exquisite stroke play Boris Becker is the man of the future.

Challenge Tournament at Toronto, she actually defeated the great Martina Navratilova (USA) 3-6, 6-4, 6-3. Her fourth defeat of the year, this is the first time since 1982 that Martina has lost at the quarter-finals stage of any tournament. The title was won by Chris Evert Lloyd (USA) who got the better of Claudia 6-2, 6-4 in the final. Chris, in fact, went on to win the next tournament as well, when she beat Hana Mandlikova (Czh) 7-6, 6-4 at St Louis on Aug 18. With this, her tally of tournament wins reads a record 140.

The US Clay Court Championship ended on Jul 29 with victory for Ivan Lendl (Czh) who outplayed Andres Gomez (Ecuador) 6-1, 6-3 in the final to win his fifth title this year and the 43rd of his career. Earlier he got the better of Wimbledon champion Becker 5-7, 6-2, 6-2 in the semi-finals.

In the \$315,000 Grand Prix tournament at Stratton Mountain, Vermont, USA, top-seeded McEnroe (USA) routed second-seed Ivan Lendl (Czh) 7-6, 6-2 on Aug 11.

From the artificial carpet surfaces of the tennis court we move indoors to Foshan in South China where 6th World Cup TT Tournament was played. Sixteen of the best players drawn from each continent participated. The Chinese, as usual, reigned supreme. In the final on Aug 25, Chen Xin Hua beat Andrejz Grubba of Poland 21-16, 21-11. In an all-Chinese, third place match, world champion Jiang Jiauang beat Chen Long Can 21-16, 22-20.

SANJEEV GUPTA

AROUND THE TRACK IN 30 DAYS

In the idyllic setting of the Emerald Isles, India just about managed, by the skin of its teeth, to retain its reputation and stature in the one-day game. At Colombo, on Aug 25, India scored the requisite number of runs (242) just three balls short of the requisite number of overs (45) to win the one-dayer by 2 wickets.

But the news that came in from the hockey front was no good. India came fifth in the 3rd Junior World Cup held at Vancouver in Canada. The tournament was won by defending champions West Germany on Aug 27 who beat Holland 4-1. Third place went to Pakistan who beat Australia 4-2 and England took the sixth

7-4 after extra-time.

Athletics had something novel lined up this month—world championships in modern pentathlon which ended at Melbourne on Aug 21. While Attila Mizser of Hungary won the world (individual) championships, the Russians easily won the team championships.

But the tennis world witnessed a few upsets. On the clay courts of Hamburg, West Germany led by Boris Becker created a sensation when they defeated the U.S. admittedly without John McEnroe and Jimmy Connors, in the Davis Cup tie by the odd match in five.

Inspired by her male colleagues, Claudia Kohde-Kilsch of West Germany powered her way to the best win of her career yet. In the quarter-finals of the \$270,000 Player's

SPORTSTAR OF THE MONTH

The Ashes are back in England with the latter defeating Australia 3-1 in the current Ashes-Cornhill Insurance series. The last two Test matches, played at Edgbaston, Birmingham and Oval, London went their way.

Captain David Gower of England, who emerged as the Man of the Series, staged a comeback with his three centuries in the series. His aggregate of 732 runs in this series makes him the highest English scorer against the Aussies.

spot when they lost to India 2-3.

With good training for converting field goals, our juniors could have got a better place as did the juniors (under-18) trained by Guru Hanuman—at the Asian Junior Amateur Freestyle Championships in Tokyo which ended on Aug 21. Seven of the 10 boys won medals, placing India second after Iran.

In nearby Kuala Lumpur, the defending champions South Korea retained their title at the 29th Merdeka soccer tournament on Aug 4. Tied at 4-4 with the Brazilian club America F.C. at full-time, South Korea went on to win

RECORDS OF THE MONTH

Men: 2,000 m: 4:51.39 Steve Cram (GBR) at Budapest; **1,500 m: 3:29.45** Said Aouita (Mor) at West Berlin; **high jump: 2.40 m** Rudolf Povarnitsyn (URS) at Donetsk.

Women: 5,000 m: 14:48.07 Zola Budd (GBR) at London; **mile: 4:16.71** Mary Decker-Slaney (USA) at Zurich.

Men: 200 m butterfly: 1:56.65 Michael Gross (FRG) at Sofia; **4 X 100 m freestyle relay: 3:17.08** US at Tokyo; **4 X 100 m medley relay: 3:28.8** US at Tokyo.

Note: In the 100 m freestyle event Matt Biondi (USA) has clocked a time better than the existing world record four times—all of these are listed here, as they await ratification by FINA. The old record was 49.36 sec, created by Rowdy Gaines of USA.

100 m freestyle: 49.24 Biondi at Mission Viejo; **49.95** Biondi at Mission Viejo; **49.17** Biondi at Tokyo; **49.14** Biondi at Kobe.

THE DURAND CUP

The Durand Cup, scheduled to commence in Delhi on Oct 1, is the second oldest football tournament in the world and the oldest in India. Only the F.A. Cup in England, which commenced in 1872, 16 years before the Durand tournament, is of an older origin. Sir Mortimer Durand started the tournament in 1888 to provide recreation to British soldiers and the Simla Secretariat personnel. He led the Secretariat team in the inaugural Durand tournament in which just six teams competed.

Since its inception, the Durand has always been played at the seat of the government. Hence, till 1939, it was played in Simla, the summer capital of the Government of British India. When the tournament recommenced after the lapse of a decade due to World War II and the traumas of partition, it has always been played in Delhi, the capital of independent India. The Durand is replete with tradition. In British India, the Viceroy gave away the prizes on the day of the final. This ritual is now performed by the President of India.

The Durand Cup was originally meant as a recreation for British soldiers and civilians in India. However, as early as 1896, there were several Indian boys in the Bishop Cotton School team from Simla, which participated in the tournament, losing 0-6 to ultimate winners, Black Watch, a British regimental team. Sandamianians from Quetta in 1931 earned the distinction of becoming the first full Indian team to beat a British side, Royal Norfolk Regiment, 1-0 in 1931.

Mohammedan Sporting club of Calcutta earned the distinction of being the first Indian team to win the Durand Cup. The historic date

was Dec 12, 1940 and Calcutta's famed black and white-shirted Mohammedan Sporting won 3-1 against the Warwickshire regiment.

The winners of the Durand tournament get three running trophies—the Durand Cup, the Simla Trophy (a silver football held aloft by three players on a silver base donated by the citizens in 1905 to prevent the tournament from being shifted to Quetta or Lahore), and the President's Trophy, donated by the Head of State.

Only three teams, in the near 100-year history of the Durand Cup have won the tournament outright for three successive years. They are two British regimental teams, the Highland Light Infantry, 1893 to 1895; Black Watch, 1897 to 1899; and Calcutta's Mohun Bagan, 1963 to 1965. When Mohun Bagan became the first Indian team to win the Durand tournament three years in a row, Gen J.N. Chowdhury, then President of the Durand Society, in recognition of their achievement, presented them his personal sword and a replica of the trophy at a glittering ceremony at the Ashok Hotel. Mohun Bagan have the best record in this tournament, having won it on 12 occasions and being runners-up six times. They also current holders of the trophy. N.K.

DULEEP TROPHY

The Duleep Trophy is of one the three premier cricket tournaments in India. The other two being **Ranji Trophy** and **Irani Trophy**. The Ranji Trophy is named after the great Maharaja Ranjitsinhji who played Test cricket for England. The Duleep Trophy is named after Ranji's nephew Duleepsinhji who emulated his uncle by representing England in Test cricket. This was well before India gained the status of a Test playing country.

The Duleep Trophy was introduced on the domestic circuit in 1961-62, two years after the introduction of the **Irani Cup**. Before the Duleep Trophy, a player's form in the Ranji Trophy and Irani Cup used to be the basis for the selection of the national squads. But the introduction of Duleep Trophy added a new dimension to the task of team selection.

This trophy is played on a zonal basis, the five zones being north, east, west, south and central. Players are selected for the zonal teams after their performance in the Ranji Trophy. In fact, a Duleep Trophy match provides stiffer competition than any Ranji tie or for that matter an Irani Cup match. The cream of talent in each zone comprises the zonal squad which often motivates the cricketers to give their best.

The Duleep Trophy is played on a knock-out basis. The top three teams of the previous year play from the semi-final stage onwards while two teams fight it out for a semi-final berth. The matches are of four days duration but from this year the Board of Control for Cricket in India (BCCI) has increased the duration to five days.

As for the statistics, West Zone have won the Duleep Trophy the maximum number of times—11 including the first four years during which they once shared it with South Zone in 1963-64. South Zone have won the trophy eight times while North Zone have won it on five occasions. Central Zone won it once in 1971-72 while East Zone are yet to win it.

The present holders of the trophy are South Zone. VJAY LOKAPALLY

THE INDIAN MASTERS

With Geet Sethi's triumph, three Indians have won the Arthur Walker Trophy. The first one was Wilson Jones in 1958 at Calcutta when he beat L. Driffield in the final. He lost in 1962 to Marshall but won again in 1964 in New Zealand beating Driffield again.

Michael Ferreira first won the trophy in 1977 at Malta when he beat Bob Close in the final. He repeated his wins in 1979 at New Delhi beating Norman Dagley and then in 1983 at Malta defeating his countryman Subhash Agrawal.

Then followed Geet Sethi's victory on debut this year in the world championships. This itself being a record apart from the fact that he is the youngest ever to wrest this crown.

V. SWAMINATHAN

THE US OPEN

The US Open tennis championship at Flushing Meadow, New York, is one of the richest tennis tournaments in the world. The prize money is worth \$1,489,000. It is one of the four prestigious or grand slam tournaments held annually. The other three being the French Open at Paris, Wimbledon and the Australian Open.

Like Wimbledon, the US Open is also steeped in history and tradition. It commenced way back in 1881 and has been held continuously since then without even a break during the two World Wars. Unlike Wimbledon, however, which has always been held on lush green grass courts, the US Open has been staged on three different surfaces—on grass courts at Forest Hills till 1974; on clay courts at the same venue from 1975 to 1977; and on special artificial hard courts since 1978 at a new venue—Flushing Meadow. Known as Deco Turf II, this court combines the best aspects of both the grass court and the clay court. There are no bad bounces, the effect of the weather is not crippling, it favours the big server and the good stroke-maker. Tournament director Bill Talbert calls it the "truest test of tennis". The surface is, however, both different and difficult compared to grass or clay courts. The DecoTurf II is consistent in bounce but in late summer the asphalt hugs the heat and pushes the temperature by as much as 15 degrees. To win the Open amidst all the heat and passion of the Flushing Meadow Park in New York City, one has to be a complete player.

Jimmy Connors, who has won five US Open titles, is the only player to have won on all the three surfaces (1974, 1976, 1978, 1982 and 1983). In the last 11 years Connors and John McEnroe (both Americans) have won the men's singles title on nine occasions, the other two going to left-handed clay court specialists Manolo Orantes and Guillermo Vilas. There has been a jinx on right handers playing for the US Open men's singles title. The last one to win it was Australia's John Newcombe way back in 1973.

Except for Tracy Austin (US) winning the title in 1979 and 1981, the women's singles in the recent past has been dominated by Christ Evert Lloyd (six times winner—1975-78, 1980 and 1982) and Martina Navratilova (winner in

1983 and 1984).

Each famous tennis tournament has its distinctive qualities. If Wimbledon has tradition, the US Open is a tough event to win. A player's game is often thrown out of gear by factors not related to tennis—the noise created by the 727s landing or taking off at the nearby La Guardia airport, trains screeching into the subway station, police helicopters swirling and swooping looking for hoodlums. Even the great Bjorn Borg succumbed to such pressures. He returned empty handed from four finals (1976, '78, '80 and '81). Above all, the US Open is very lucrative for the successful players or the prodigies. To do well at the US Open at the Louis Armstrong stadium is a ticket to lucrative deals in American clothes, shoes and other endorsements. N.K.

THE SUBROTO CUP

The Subroto Mukerjee Cup football tournament, held annually in Delhi, invariably alongside the prestigious Durand Cup, has in a short span of two decades, become a landmark in the country for organised sport at the school level. The tournament was started in 1960 with the cup having been donated by the Durand Society in memory of the late Air Marshal Subroto Mukerjee, whose contribution to Indian football and the Durand Society was noteworthy. However, within a year, there was spectacular increase in the popularity of the tournament, and school teams from numerous states participated.

The sports wing of every education department in each state and Union territory annually organises an inter-school football tournament in their area with the winners from each state qualifying for the Subroto Cup proper at Delhi. Only the holders are allowed automatic entry and so another team from the same state is also permitted to play. By the method thus evolved, over 7,000 schools compete in the qualifying rounds and nearly 80,000 schoolboys below 17 years figure in the competition indirectly.

To give a further boost to budding football talent in the country, the Subroto Mukerjee Cup authorities since 1972 have been awarding 14 to 16 annual scholarships to players with potential on the basis of their performance in the actual tournament in Delhi. Laudable though this scheme is, it has not produced the desired results as most of the junior talent just fades off the scene. This is because there is very little organised senior football in these areas. As there is no follow-up action, many talented players just cease playing in the prime of their career. Unfortunately, this lack of follow-up action by the AIFF and the state authorities has defeated the very purpose of the Subroto Cup. So far players from West Bengal have won 23 scholarships—the maximum by any state in the country.

Unfortunately, unlike the Nehru Hockey tournament society, which annually holds a summer coaching camp for the promising players of the junior Nehru tournament (for school teams) the Durand Society because of financial liabilities is unable to do so. It is imperative that the AIFF with help from private sponsors, initiate the task of conducting an annual coaching camp and other follow-up action for schoolboy footballers. N.K.

STAR WARS

The world is being rocked by the fear of a possible nuclear holocaust. And the controversial US Star Wars programme—a four-stage layered, defence system capable of destroying enemy nuclear warheads in space—has been the epi-centre of this quake. A stage-by-stage study of this fresh arena in war technology.

THE NUCLEAR NIGHTMARE

The name Star Wars evokes differing responses in people depending upon their knowledge and perceptions. Some presume that they are adventurous battles to be fought in distant galaxies by gallant and noble space-men whereas others view them as harmless exercises being conducted by the superpowers to face unknown nuclear challenges.

Stars Wars are closely connected with the term Strategic Defence Initiative (SDI) coined by US President Ronald Reagan. This term signifies US programmes to develop a space shield against hostile nuclear weapons. The Western research programmes for SDI are being developed simultaneously by the American and European industries.

While the American Pentagon is interested in having a single programme incorporating the European industry to develop the Star Wars technology, the French have proposed a European plan of their own—Eureka—aimed at pooling the European sources to prevent Europe from becoming a mere satellite of American and Japanese high tech industries. Initially, the Soviet Union did not accept the American concept of research for space weapons but lately they have veered round to accepting research but are against development and testing of space-based nuclear weapons. The space shuttle Discovery, launched by the US in June this year, carried out space tests in laser technology for the controversial Star Wars anti-missile defence programme.

Evidently, the SDI will not add to security but will take the arms race into outer space thus obstructing the arms limitation talks. The militarisation of outer space would fling open new frontiers of global destruction. Unfortunately, the imperatives of halting the danger of nuclear conflagration are being negated by

President Reagan's insistence on developing these 'defensive' weapons. According to the US, the race for Star Wars is held on and off and if they do not develop such weapons, the Soviet Union may do so. Despite differences with NATO allies, the US has continued to develop space war technology.

This \$26b. five-year research programme is seen by some NATO allies as a hedge against Soviet efforts to develop space-based defensive arms. These weapons would counter the Soviet SS-18 missiles which have a range of 7,000 miles and carry 10 nuclear war heads. For the defence of Western Europe, it is proposed to utilise space-based technology to counter the Soviet SS-20s which have a range of 3,000 miles.

Effect On Third World

Superpower strategies in respect of the Third World are concentrated in the Indian Ocean region. The aim of these strategies is to control the global economic order to serve their respective interests. The US thrust in the sphere of Star Wars strategy is on anti-satellite (ASAT) measures in the Southern Hemisphere. These measures use interceptor satellites which make more than one orbit before interception with American F-14 and F-15 fighter aircrafts which fire ASAT missiles at a range of 900 km within the Southern Hemisphere. Soviet satellites have lower and elliptical orbits with perigees over the Southern Hemisphere. The destruction of the Soviet satellites that provide command control, communication and intelligence functions to military commanders, will impair the Soviet ability to conduct a nuclear war.

As the Indian Ocean occupies one-third of the Southern Hemisphere—an area most vulnerable to Soviet satellites—India and other littoral countries cannot remain unaffected in the case of a nuclear Star war. A 12,000-ft long airfield at Diego

Garcia in the Indian Ocean and the aid of Australia, and south Africa are available to the US. However, the Soviet Union too has limited facilities and naval presence in the Indian Ocean.

First Nuclear War

The US tested a secret weapon in the New Mexico desert on Jul 16, 1946, which resulted in the destruction of all life within a one-mile radius. As a cover plan, this explosion was explained as the blowing up of a huge ammunition dump. Three weeks later on Aug 6, the first nuclear war commenced when an American B29 Bomber dropped 'Little Boy' on the Japanese city of Hiroshima. This atomic fission bomb was equivalent to 20 kilotons (20,000 tons) of TNT and was called a 'nominal bomb.' Three days later another nominal atomic bomb 'Fat Boy' was dropped on the second Japanese city of Nagasaki. The dropping of this atomic bomb resulted in a nuclear holocaust that destroyed the Japanese military-industrial complex, killed lakhs, injured more and scarred coming generations with dreadful diseases. The atomic bombs resulted in Japanese surrender, bringing the six-year-old war to a close.

The US objectives in adding a nuclear dimension to the war were several: to defeat Japan militarily, impose a US democratic and economic pattern on Japan, prevent British, French and Dutch colonialism, prevent the spread of communism (as the USSR was to open their Asian front in mid-August) and lastly to prevent the emergence of USSR as an arbitrator.

The study of the first nuclear war is essential to understand that no nuclear guarantee or umbrella proposed by the superpowers can be depended upon especially by the Asian and underdeveloped nations.

The Alternative

The only alternative to nuclear holocaust and Star Wars is a ban on nuclear testing. To mark the 40th anniversary of the bombing of Hiroshima and Nagasaki, the Soviet president Mikhail

Gorbachov announced in late July 1985, a five-month-long unilateral moratorium on nuclear testing. When the US merely responded with an invitation to witness American nuclear tests, USSR again offered to extend the nuclear testing moratorium beyond a five-month period to as long as the US refrained from nuclear testing. Ultimately the US has agreed to join the moratorium after completing the present nuclear testing programme.

About 1,507 nuclear tests have been conducted since the first test in July 1945 (US-756, USSR-556, France-127, UK-38, China-29, India's peaceful nuclear explosion at Pokhran in 1974-1). The aim of nuclear tests is to design and develop nuclear weapons, increase confidence in the weapons stockpile and judge the impact of nuclear weapons on military systems.

Test Ban

The history of nuclear ban makes a fascinating study. The period 1958-61 saw a moratorium on atmospheric nuclear explosion (these cause heavy radiation hazards). After the Cuban missile crisis in 1962, a partial test ban covering air, underwater and outer-space nuclear testing was signed between the two superpowers. These bans did not apply to France and China—France continued the banned tests till 1975 and China till 1980. In 1974 the Threshold Test Ban Treaty restricting nuclear tests to no more than 150 kilotons was signed and in 1976 the above restriction was extended to peaceful nuclear explosions. Unfortunately, President Reagan abandoned all test ban negotiations.

The major hurdle in negotiating a test ban treaty has been the extensive lobbying by three nuclear weapon laboratories at Los Alamos, Lawrence Livermore and Sandia. The US scientists feel that a revolutionary change in nuclear weapon technology is round the corner and their country must remain in the lead. While the first nuclear weapons were of the fission type, the bulk of world's nuclear arsenal today is of the fusion variety. The current testing is designed to produce the third generation nuclear weapons for specific effects. In the new generation weapons a fraction of energy from a nuclear weapon is focussed into one or more narrow beams or a specific target.

Treaties

Article V of the peaceful Nuclear Explosion Treaty signed between the US and USSR in 1976, recognises the need for peaceful nuclear explosions and calls for research aimed at its applications to civil engineering, earth moving, creating underground reservoirs and stimulation of oil and gas production. India is working to develop technical know-how for peaceful

application.

The Nuclear Non-Proliferation Treaty (NPT) sponsored in 1968 by the US, USSR and UK is heavily weighted against non-nuclear states, while there has been no progress in nuclear disarmament with the number of war-heads rising from 4,500 with 2,300 megatons in 1968 to 13,330 with 9,200 megatons in 1985. Seventeen years after the signing of the treaty, no nuclear state has emerged but an ambiguity has arisen about the status of Israel, South Africa and Pakistan. Another potent danger is of transference of tactical or strategic nuclear weapons to allies.

India continues to be opposed to the NPT while Pakistan has been pressing for India to join this unequal treaty to provide legitimacy to the arsenals of the five nuclear weapon powers (USSR, USA, UK, France and China) and accept nuclear hegemony of China in South Asia in general and the Indian sub-continent in particular. Its offer of mutual inspection of the nuclear facilities is unacceptable to

India and its clandestine method of acquiring nuclear weapons has shaken this country's confidence. Pakistan has imported natural uranium from Niger through Libya and procured 6,200 centrifuges from the Netherlands for the enrichment facility at Kahuta. It has also surreptitiously tested the US-made Krytron electronic switches in a non-nuclear explosion. China is also reported to have revealed in 1983 the details of its fourth bomb test.

Dismal Future

While we consider the nuclear threat from our neighbours, let us not forget the Star Wars that might engulf Asia when the region of Indian Ocean becomes an arena of anti-satellite missiles destroying Soviet satellites or other missiles. The first nuclear war of 1945 gave us a reprieve of four decades, the next one may perhaps be the last. Will the voice of sanity raised by our PM Rajiv Gandhi, the non-aligned world and the crusaders for peace the world over, be heard and the reprieve extended?

U.N. KUMRIA

ANATOMY OF STAR WARS

The US Strategic Defence Initiative (SDI), commonly known as the Star Wars system, is basically a plan for a defensive system capable of destroying enemy nuclear warheads in space before they reach their target. Proponents of SDI have identified four stages during the flight of an intercontinental ballistic missile when the missile could be attacked. The overall plan envisages a 'layered defense system' involving all the four stages.

Immediately after launch, the missile carrying rocket gains rapidly, covering about 100 km in just four minutes. At this stage, called the boost stage, the missile is most vulnerable because it can be easily spotted by infrared sensors due to its huge, hot exhaust plume. Another advantage of attacking at this stage is that several warheads can be destroyed in one hit because each missile carries up to ten warheads. But despite all these advantages, the boost stage is the most difficult for an attack. For not only would the missile have to be spotted quickly, within four minutes, the weapon would also have to be effective from a long distance.

In the second stage, called the post-boost or deployment stage, the missile climbs up to an altitude of about 650 km after which its 'nose cone' is cast off. At this stage a device, known as a 'bus', detaches itself and manoeuvres for another five minutes or so, releasing up to 10 warheads and 100 decoys. As a result, during this stage of the missile's flight the number of 'targets' multiplies rapidly. Tracking all of them and identifying the

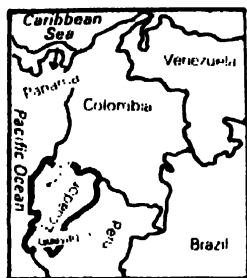
real ones would be a problem because of the extremely short time (about five minutes) available.

Next comes the mid-course stage, lasting about 20 minutes, during which all the warheads and decoys follow predictable paths that may take them as high as 1,000 km into space. The main problem here would be of distinguishing between real warheads and decoys which would appear much alike both to infrared sensors and to a radar. A typical group may comprise about 8,000 warheads hidden among as many as 1,00,000 decoys. To distinguish between them at this stage would require huge computer capacity and highly complex programming. Even then the identification may not be absolutely foolproof. So, although the time available is plenty, the mid-course stage is not ideal for countering a missile attack.

The final stage before a missile hits its target is the re-entry stage during which the decoys, being much lighter, burn up rapidly and only the real warheads penetrate the atmosphere. So the number of targets to be tackled falls sharply. But, again, the time available for a counter attack at this stage is extremely short—a mere 30 to 100 seconds—during which the warhead has to be spotted, aimed at and hit. For better reliability the proposed Star Wars system envisages a layered defence system that would attack the warheads throughout their flight, destroying more at each stage. Simple

IN THE NEWS

ECUADOR



The South American Republic which lies astride the equator and has a name which sounds very much like the equator—Ecuador—was in the news recently because a group of

Ecuadorians, without the sanction of the government, visited a group of Sikh extremists in England and expressed sympathy with the extremists' demands. The Ecuadorian delegation was unofficial but even if it had been official, it would hardly have mattered in real terms because Ecuador is too small and weak to pressurise a country of India's size and stature. Ecuador is only 1,09,484 sq km in area and has a population of only about 7m people. About 50% of the people are native Indians, 25% are mestizos (mixed Indian and whites), 15% are blacks and only 10% are white.

Spanish is the official language but Quechua is still spoken by a segment of the Indians. Most of the people are Roman

Catholics but no official recognition is granted to it nor does the state give it any financial support.

Within the past decade, Ecuador has changed from a country relying on an agrarian economy to an oil rich industrialised nation. It is a member of the Organisation of Petroleum Exporting Countries (OPEC). Yet, the nation's output of oil is relatively small and it may have to resort to petroleum import in the late 1980s.

From the historical point of view, however, Ecuador's civilisation goes back a long time. Its history has recently been re-written after the discovery of pre-Incaic archaeological art in the Littoral, Sierra and the Oriente regions. Intensive farming, permanent villages and ceramics date back over 5,000 years in the Guayas Basin of coastal Ecuador. Thousands of years later in the 15th century, Ecuador became part of the Inca Empire. In the early 16th century, the Spaniards took over the Incaic bureaucracy and assumed tenuous control.

In 1822, Ecuador joined the Confederation of Gran Colombia (with Colombia and Venezuela) and became an independent nation seven years later. At first, its political tendencies were conservative Catholic. But soon there was the growth of a strong liberal tendency and in the late 19th century, there was a civil war and the political pendulum swung towards

the left. Thereafter, capital was pumped in from North America, Britain and France, and there was a rightist swing in the early 20th century. There was another civil war around 1912. Political instability continued between 1925 and 1948 and no president was able to complete his term in office. In fact, Galo Plaza Lasso, who was elected President in a free election in 1948, was the first President since 1924 to complete his constitutional four-year term.

In the 1950s there was a trend towards peaceful government, but in 1963 a four-member military junta again took over the control after a period of dissatisfaction and ruled till 1966. The armed forces again assumed control in 1972 after a coup and ruled till the late 1970s. At present, there is a civilian government in Ecuador.

Effective power rests with the large estate owners. There has been political instability in the land since independence, and despite its memberships in a number of international organisations including the UN, the Organisation of American States (OAS), the South Pacific Commission and the Group of 77, Ecuador does not wield much influence in world politics. Economically it had had some clout for some time in the 1970s because of its oil revenues, but even that is now on the decline with a fall in its oil production. And politically its word does not carry weight.

S.B. & I.S.

arithmetic shows that, if enemy missiles had to pass through four separate layers of defense (one designed for each stage) and each one was only 90% effective, only one out of 10,000 warheads would get through.

Weapon Systems

Three satellite-based weapon systems are being considered for the Star Wars programmes namely lasers, particle beams and kinetic energy weapons. Lasers are well-known devices capable of generating extremely high-powered, concentrated beams of light, almost perfectly parallel and of a single wavelength. The 'killing' power of laser beams comes from the enormous amount of energy that can be crammed into them, and the ease with which they can be focussed over thousands of kilometres. When focussed on a target, a high-energy laser beam could decapitate an approaching missile by burning a hole into it, destroying its guidance mechanism and deactivating its warhead. However, to be effective, the power of the beams will have to be at least 25Mw which is several million times the output of the most powerful chemical lasers built today.

Two strategies are being developed for

deployment of chemical laser weapons. One of them envisages ground-based generation of high-energy laser beams which would be reflected by satellite-borne relay mirrors to the targets. The other plan is to produce the beams on board low orbit satellites and aim them at the targets by special reflectors. Another concept being considered is the use of extremely energetic X-ray lasers fuelled by small nuclear explosions. Although such a system will have high destructive capability, several thousand of them would be needed in space because each X-ray laser can be used only once as it is destroyed by the nuclear blast that produces the X-rays.

The basic principle behind a particle beam weapon is the fact that charged sub-atomic particles such as electrons and protons can be accelerated to extremely high speeds—almost 99% the speed of light. At such speeds the particles emerge from the accelerator as a tight beam which can be focussed on a distant target to destroy it. But there are two snags. Firstly, particle accelerators are massive systems weighing several hundred tonnes which will have to be lifted into orbit. Secondly, the accelerated beams, being made up of

charged particles, would be easily distorted by the earth's magnetic field which would put them off target. There is a proposal to 'neutralise' the beam before it leaves the accelerator to avoid the problem, but that would reduce the power of the beam substantially.

Kinetic-energy weapons are nothing but simple objects like rockets, rocket debris or even pellets of metal fired at a missile to knock it off by sheer impact. Potentially these weapons would be effective at any stage from boost to re-entry, and can be fired either from ground or from space. But the problem is their limited range, of only hundreds rather than thousands of kilometres.

Although the scientific principles behind all the systems proposed for the Star Wars programme are well-known, the feasibility of actually setting up such a multicomponent system is still unknown. Many of the weapon systems envisaged in the plan would involve scaling up of existing systems several thousand fold. Even if such a system actually comes into being, it is quite possible that by then the other side will have come up with weapons that can get the better of it.

BIMAN BASU

ESSAYS

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POVERTY ELIMINATION PROGRAMMES

With the introduction of planned economic development in 1951 it was expected that the benefits of growth will automatically percolate down to the weaker sections of society. However, in reality the number of people below the poverty line continued to increase. This compelled the planners to change their strategy. Specific programmes like the Small Farmers Development Agency (SFDA) and the Marginal Farmers and Agricultural Labourers Development Agency (MFALDA) were undertaken in right earnest in the late 60's. Unfortunately these programmes were restricted to a few pockets in the country. More ambitious programmes like the Integrated Rural Development Programme (IRDP) and the National Rural Employment Programme (NREP) were launched by the government in the '70s to make available to the poor a decent standard of living.

It was in 1972 that the Maharashtra Government, started the Employment Guarantee Schemes (EGS) with a view to alleviating the misery of the poor. The aim was to provide gainful employment to all the unemployed, unskilled workers in the state. However, these noble intentions could not be translated into reality as the wages offered were too low to attract the workers. Even community assets did not come up due to ad-hocism in decision making and lack of proper planning. Similar schemes were taken up by other states also but the inherent loopholes rendered them largely ineffective.

In 1977 the Centre started the Food For Work programme (FFW) to provide employment opportunities to the rural poor, particularly during the slack employment period, and, at the same time, create durable assets. The wage component under the programme had two parts, viz, cash and foodgrains—the latter to ease the pressure on the public distribution system. But, there were shortcomings in the implementation of this programme and, therefore, in 1980, it was revamped, res-

structured and rechristened as the National Rural Employment Programme (NREP), with the aim of generating additional employment of 300-400m mandays per year for the rural unemployed and the underemployed.

The payment of wages in terms of foodgrains was restricted to 1 kg per head, per day and the balance wages were paid in cash. The programme also sought to build up the rural infrastructure to give a fillip to the growth process in rural areas. Started on a 50:50 sharing basis between the Centre and the states, the NREP achieved its moderate targets in 1981. But, success can only be termed as partial because a large amount of funds and foodgrains go unutilised by the states, revealing the weaknesses in the implementation of the programme. Lack of a proper planning and monitoring agency, along with delays and large-scale bunglings, have hampered this programme.

Realising the limitations of the various schemes, a wider and more comprehensive Integrated Rural Development Programme (IRDP) was taken up in 1978-79 and extended to all the 5,011 blocks in the country. Its objective was to raise the families in the target group above the poverty level and create substantial employment opportunities in the rural areas. The poorest of the poor families were identified and provided assistance covering the essential services. The enumerated activities for the small and marginal farmers, agricultural and non-agricultural labourers, rural artisans and the SC/STs were to be financed partly by bank loans and partly by subsidy. This programme is again shared by the Centre and the states on a 50:50 basis. Though the government is trying hard to make IRDP a success, faulty implementation is a major stumbling block. However, in the Seventh Plan, with the organisation of the beneficiaries into clusters or groups, a new thrust is being envisaged for improving the programme.

To remove the problem of unemployment among the rural youth the national scheme of Training for Rural Youth for Self Employment (TRYSEM) was initiated. The aim was to encourage the rural youth to take up self-employment. The scheme gives a special place for women and SC/STs. But the lack of a comprehensive approach has prevented the fulfilment of its objectives.

The landless poor in the countryside have not been ignored by the planners. To

improve their plight, the Rural Landless Employment Guarantee Programme (RLEGP) was announced in 1983 with a view to improve and expand employment opportunities for the rural landless, provide employment guarantees to at least one member of every landless labourer's household, upto 100 days in a year, and create durable assets for building up a viable rural infrastructure. Under the Sixth Plan Rs 600 crores were allocated and during 1983-84 Rs 100 crores were released to various state governments and Union territories for the implementation of the programme. However, the Centrally sponsored scheme is still in its infancy and a proper evaluation can be made only after a few years.

All the above-mentioned anti-poverty programmes, though well designed, have failed in their implementation stages. Proper identification of beneficiaries and project mix alongwith appropriate monitoring agencies and trained man power can certainly make these programmes more effective. The backward and forward linkages associated with any activity have to be recognised at the time of financing the projects under these programmes. Poverty can be banished but strong political will is required to take harsh decisions. Can we expect bold decisions in this regard from the government? Only time will tell.

J.V. ARUN KUMAR

INDIA'S ACHIEVEMENTS IN SCIENCE AND TECHNOLOGY

When India attained freedom in 1947, it did not have any worthwhile infrastructure for the development of science and technology nor did it have a sound industrial base. Agricultural production was abysmally low and health-care services were non-existent. Yet less than four decades later it has emerged as a major technological power which can design, build and run its own nuclear power plants, build and launch its own satellites and ranks tenth among the industrialised countries of the world. Today India not only produces all the foodgrains it needs for domestic consumption, it also exports them. With improved health-care services, the life expectancy of the average India 3 years more today than what it was three decades ago. Death rate has come down from 47 in

15 per thousand.

After independence, the main thrust of agricultural research was to achieve self-sufficiency in foodgrains. Several measures were initiated by the government to achieve this goal. The Indian Council of Agricultural Research was reorganised into an autonomous, apex agency to promote agricultural research and education in the country. Agricultural universities were set up in each state—today there are 23 of them. Advanced centres of postgraduate education and research were also set up to promote advanced research in plant genetics and plant breeding. Another important step was launching of the All India Coordinated Research Projects to utilise human and material resources available within the country.

On another level, large strides have been made in providing agricultural inputs such as fertilisers and water for irrigation. Large fertiliser complexes were set up, and today India is the fourth largest producer and consumer of nitrogenous fertilisers in the world. Rapid expansion of irrigation facilities in the last three decades has brought more than 2,300m hectares under irrigation, which is the second largest area under irrigation in the world. The third significant input has been the introduction of high yielding varieties of crops including wheat, rice, maize, and sorghum. All this has led to substantial increase in agricultural production. The total foodgrains production during 1983-84 was more than 140m tonnes as against 50m tonnes in 1950-51.

In the field of medicine, major research efforts have been promoted through the Indian Council of Medical Research. The main thrust of the research programmes has been, to improve the national health by eradication and control of communicable diseases, fertility control, promotion of maternal and child health and developing alternative strategies for health care delivery systems through the primary health care approach. Two of the most significant achievements since independence have been the eradication of small-pox and plague. Cholera, which often broke out in epidemic form in the past, is now totally under control. National programmes have been launched against TB and leprosy which have shown encouraging results. In the field of population control, signs of success were evident in the 1981 census figures which showed for the first time a levelling off of the 10-year growth rate. The annual growth rate at pre-

sent is estimated at 2.3%. Newer methods of contraception are under development.

India is one of the first countries in the world to go in for nuclear power. India's first nuclear power plant was commissioned in 1963 at Tarapore. Since then two more atomic plants have come up at Kota in Rajasthan and Kalpakkam in Tamil Nadu. Two more plants are under construction at Narora in UP and Kakrapar. The present target of nuclear power generation is 10,000 Mw by 2000 A.D. The significant feature of India's nuclear power programme is the gradual indigenisation of the plants. The Tarapore plant was totally imported; the Narora plant will have less than 3% imported components. India has also built up the infrastructure for a sustained nuclear power programme. It has its own uranium mining and processing facilities, fuel fabrication facilities, heavy water production plants and spent-fuel reprocessing facilities, which make it almost totally self-reliant in the vital high technology area. Besides power generation, India's nuclear research programmes include use of radio isotopes in agriculture, medicine and industry. India today has facilities for producing its own radio isotopes in its research reactors.

India today produces a wide range of electronic goods and equipment such as radars, broadcasting equipment, television sets, telecommunication switching and transmission equipment, satellite earth stations and nuclear reactor control equipment. Except for a few specialised items, most of the materials and components for these products are produced within the country. Over the past few years, the indigenous computer industry has shown considerable growth. The country today manufactures a number of mini-computers and microprocessor-based systems which were earlier imported. The Department of Electronics has successfully promoted computerisation through a number of its regional centres. At present computers are being used for a wide variety of applications including railway and airline bookings, medical diagnostics, banking, photocomposing and printing industry and in several manufacturing industries. Recently, India has started manufacturing its own 'chips' for the computer industry at the semi-conductor complex near Chandigarh.

One of the most spectacular successes of Indian science and technology has been in space research. Today, India is the only Third World country which has the capability to design, build and launch its own satellite using its own rocket. The activities of India's space programme are spread over four major centres of the Indian Space Research Organisation (ISRO) which has its headquarters in

Bangalore. The largest of the ISRO centres is the Vikram Sarabhai Space Centre in Trivandrum, which is primarily concerned with the development of launch vehicles. It is here that India's first satellite launcher SLV-3 was designed and built. The centre is now working on a modified version of the rocket, called Augmented SLV-3 which is to put a 150-kg satellite in orbit sometime next year. The SLV3 rockets have so far put three 40-kg Rohini satellites into near-earth orbit. The ISRO Satellite Centre at Bangalore is responsible for developing satellite technology and implementation of satellite systems for various scientific, technological and applications missions. The centre has so far built seven satellites including the Aryabhata, two Bhaskaras, three Rohini satellites, and the APPLE which is the heaviest and most sophisticated satellite built by Indian scientists. The SHAR Centre at Sriharikota in Andhra Pradesh is the place where the largest rocket-launching facility of ISRO is located. It is equipped with all the latest ranging and monitoring facilities of a modern launch complex. The fourth major ISRO centre is the Space Application Centre at Ahmedabad which is primarily responsible for developing programmes for satellite application.

The commissioning of INSAT-1B in October 1983 was a triumph for India's space programme. Although the satellite was built by an American firm, its design was entirely Indian. It was the ISRO scientists who thought of combining the three functions of telecommunication, television and meteorology in a single satellite to cut the cost. Today, INSAT-1B is the only satellite in the world with multi-purpose capability.

B.B.

SHIFTING CULTIVATION

Stark faces of hills that were green once but are bereft now. remorselessly creeping wastelands taking vast expanses of land into their sweep. Deserts where there were forests, waste where there was wealth. Images poignant and painful, but very real, stare out of the hilly areas of north-eastern India, Andhra Pradesh, Bihar, MP and Orissa. These tracts have been abandoned by farmers who once cultivated them for food. The farmers have shifted to greener pastures where they will repeat the process—the process of shifting cultivation or jhumming. It involves razing forests to stumps of trees and leaving them to dry up. The last remains of the forests are then burnt and the cleared land farmed upon. The day the land loses its fertility and stops yielding crops the farmer

(Continued on page 67)

INDIA'S NUCLEAR OPTION

BY SRIDHAR RAMAN

Pakistan is on its way to making a nuclear bomb. Posing a grave threat to India's security. And prompting it to revise its defence strategy. The question which looms large is: Should India go nuclear? M. Zuberi of Jawaharlal Nehru University and K. Subrahmaniam, Director, Institute for Defence Studies and Analyses, feel it should. Their reasons.

There has been, since the year 1968 when the Nuclear Non-Proliferation Treaty (NPT) was signed, a continuing "qualitative and quantitative" proliferation of nuclear weapons by the USA, the USSR and the UK—the three sponsors of the NPT. No new nation has become a nuclear power since then. However, the status of Pakistan, South Africa and Israel is somewhat hazy. India would not have been concerned were there no reports that Pakistan was on its way, rapidly in fact, to make the nuclear bomb. Should Pakistan be successful, against whom would it be used? "Against India, of course," as there is no other nation in the vicinity or anywhere else on the globe on which Pakistan can think of dropping it. Therefore, a sizeable section of Indian public opinion has started demanding that India should also produce nuclear weapons.

The situation is reminiscent of 1974 when India detonated her maiden nuclear device. Then Pakistan was overcome by a similar tide of public opinion. And Bhutto's outburst: "We will eat grass and leaves but make the bomb" epitomised the violence of such reactions. Now the scene has shifted from Pokharan in Rajasthan to Kahuta near Karachi and from Pindi to Delhi. PM Rajiv Gandhi and the Foreign Minister, Khursheed Alam Khan, have made it amply clear, though in a subtle way that India will make the bomb should Pakistan make one. Khan told the Lok Sabha: "If Pakistan makes a nuclear bomb, the security environment will be affected and we will have to respond suitably." The Defence Minister, Narasimha Rao, had earlier remarked: "It was time for us to elicit the opinion of the Parliament on the question of whether India should go nuclear." And the PM had said: "We have not made any decision but we are thinking about it."

To get an expert opinion on the issue, we talked to M. Zuberi of the Jawaharlal Nehru University, and K.

Subrahmaniam, Director, Institute for Defence Studies and Analyses.

Zuberi thinks it is necessary, to analyse India's security environment before any discussion on the possibility of India opting for a bomb. Despite China's awesome military might and the fact that it continues to occupy a large chunk of Indian territory, Pakistan and not China is our major adversary. In less than four decades we have had to face three major attacks by Pakistan and the obvious reasons for those attacks are "still obsessively alive in the Pakistani psyche". It uses every opportunity to raise a dead issue like Kashmir at international forums. Stockpiling of arms continues

We are aware of the Sino-Pak tie-up. In the '65 and '71 wars, China uttered thinly veiled threats to intervene on Pakistan's behalf. The Sino-Pak axis remains as active today as it was during those wars. It is also feared that China has been aiding Pakistan in its nuclear weapons programme, besides helping the development of its conventional army and armaments. The construction of the Karakoram Highway, partly on India's territory occupied by the two countries, is further proof of the growing Sino-Pak military collusion. The sporadic clashes in the Siachen area point to the explosive nature of our security environment.

The sharply increased American military aid to Pakistan is causing concern to India. It is common knowledge that Pakistan is the kingpin in the American designs "to tilt the military balance in this region to the West's favour". The US, though it may not have actually abetted Pakistan's nuclear weapons programme, has done nothing to discourage it. The improving Sino-American relations also benefit Pakistan. The nuclear cooperation pact signed between them and the unprecedented US visit of the Chinese Premier, further strengthen India's fear that certain powers are colluding against it. The pact does not put an embargo on China transferring the nuclear know-how it will get from the US. It can, therefore, be easily traded with Pakistan.

Within the country, the insurgency problem in the north-east has not come to an end. The long standing agitations in Punjab and Assam seem to have been settled for the time being. The internal security in the country may not

be as dangerous as it was in the past, but we have yet to reach a comfortable level.

Has Pakistan got the bomb? "We don't know for certain that Pakistan is making or has made the bomb but all available evidences point in that direction," opined Subrahmaniam. Recently, even the Pakistanis have stopped denying they are making the bomb. On the contrary they have been asserting their right to make it.

The circumstantial evidence also proves that Pakistan is serious about the bomb. It has a uranium enrichment plant at Kahuta near Karachi. Pakistan cannot make any peaceful use of enriched uranium because its power plant runs on natural uranium. "Therefore", says Zuberi, "the only logical inference is that Pakistan is using enriched uranium to fuel a clandestine nuclear weapons programme." The country has also made painstaking efforts to acquire plutonium reprocessing facility. Reprocessed fuel too does not fit into Pakistan's atomic power plans. Some Pakistani scientists like A.Q. Khan have managed to smuggle vital technical information regarding nuclear weapons from a high security nuclear facility in Europe. Pakistan has also managed to acquire a large number of centrifuges of the type and specifications needed to process weapon grade uranium. All this indicates that a nuclear programme is taking shape in Pakistan.

Economics: There is a general feeling that nuclear weapons are so expensive that developing countries like India should not think of making it. They had better take care of their poverty. "This fallacy is propagated by nuclear non-proliferation literature; manufacturing nuclear weapons will make no difference to our defence budget," says Subrahmaniam. Zuberi observes that none of the present big nuclear powers "was in a buoyant economic state when it embarked on its nuclear weapons programme. The US, though not in economic straits, opted for nuclear weapons after Truman and Eisenhower had put a ceiling on defence spending." All these countries realised that "going nuclear was the only way to build a strong defence without having to spend too much money on it."

The US defence expenditure has escalated relentlessly since then and has reached a mind-boggling trillion dollar mark. That, however, is largely because the American security concerns are not limited to defending its

(Continued on page 68)

HOW TO MANAGE MANAGEMENT (Continued from page 29)

the above average knowledge of the language. It would not be an exaggeration to say that 'anything' associated with management has 'everything' to do with English—right from lectures, books of a very high standard authored by persons of international repute, mid-term and end-term exams, class quizzes to project reports and class participation.

It is, however, possible to get away with only a smattering of spoken English, so long as one is able to understand and write well. But as the rank-holder pointed out, "It is one thing to do well in exams. It is quite another to be recognised as smart and impressive. And at the time of final placement, smartness and fluency count a great deal with international names like the American Express, Bank of America, Citibank, Hindustan Levers, Grindlays, etc."

How does one learn to speak and write well? Perhaps the experiences of two people would help. One of them, a product of IIM, Ahmedabad, is presently pursuing a lucrative career in Hindustan Levers. Despite his public school background, he gave himself as many as 14 months to brush up his English for CAT. He would read the daily newspaper thoroughly, picking out difficult words as well as words he was familiar with, but the exact meaning and usage of which he was not sure of. He would even write down the words in

which they occurred. This way he not only expanded his vocabulary but also learnt how to effectively use it. Listening to BBC was a daily routine. It helped him learn to speak correct grammatical English and also improve his pronunciation.

The second experience, that of a first year student, has as its highlights participation in debates, extensive reading and listening to radio bulletins. The three have helped him develop fluency, so much so that he found it difficult to believe that barely three years ago, he spoke haltingly, always groping for the right word. Debates forced him to practise public speaking for long durations and radio bulletins supplied him with readymade sentences which he memorised effortlessly and used them on appropriate occasions. This helped him become a good conversationalist also. Reading, he said, gave him "a feeling of confidence and power".

If the opinion of some of the second-year students is taken seriously, it would appear as though students with a cost and chartered accountancy background have a bright chance of being very good management students, and later on, becoming good managers as well. This is, because, of the 21 compulsory courses in first year, as many as seven or eight have quite a lot in common with courses in cost and chartered accountancy. The two that were cited as excellent examples are Managerial Accounting and Control I and Control II. Even though it is a fact that students with this background invariably do extremely

well, the rank-holder insisted that if there is any advantage it is only in the initial stages. "What matters ultimately is not the discipline in which one has majored but his capacity for hard work." And what may be added here is the word 'brilliance'.

However, it would be wrong to assume that only people with brilliant academic achievements to their credit can hope to make it to the country's reputed management institutions. There are scores of examples of people who beat the CAT and later got the cushiest of jobs, in spite of their average performance. And this is true especially of students from the arts and humanities stream. "It is hardly surprising because what the CAT looks for in its challengers is worlds apart from what the decadent universities look for in their prospective graduates"—said a second-year who majored in Economics. He attributed his success in the CAT to his aptitude for Maths, good vocabulary and a brilliant extra-curricular record. Apparently, his accomplishments in music and drama had impressed the board so much that it questioned him only on these two subjects. He was even asked to sing!

It would not, therefore, be too far from the truth to say that as far as the CAT is concerned, having a good academic record is a great, but not an indispensable asset. In any case, as has already been discussed, what matters ultimately is a logical mind, a sound mathematical ability and capacity for strenuous effort.

(To be concluded)

DATA INTERPRETATION-2

(Continued from page 28)

will be $1120.76 \times 12 = 13\,449.12$ units.

Problem-5

The seasonal indices for the sale of readymade garments in a store are given below:

Quarter	Seasonal index
January-March	98
April-June	90
July-September	82
October-December	130

If the total sale of garments in the first quarter is worth Rs 1,00,000, determine how much worth of garments of this type should be kept in stock to meet the demand in each of the remaining quarters.

solution

Calculation of estimated stock

Quarter	Seasonal Index	Estimated stock (Rs)
Jan-Mar	98	1,00,000
Apr-Jun	$\frac{90}{98} \times 1,00,000 = 91,836.73$	
Jul-Sep	$\frac{82}{98} \times 1,00,000 = 83,673.45$	
Oct-Dec	$\frac{130}{98} \times 1,00,000 = 1,32,653.06$	

Problem-6

The average of wholesale prices was higher in 1977 than in 1976 by 15.1%, the index number for the two years being 108.7 and 94.4 respectively, (1970 = 100). This increase followed a rise of 6.1, 1.0 and 2.8%, each year being compared with the preceding year. In 1973 the prices were the same as in 1972, but 2.5% below 1971. Prices in 1971 were 12.2% below 1970. Based on this data, compute the index number for each year from 1970-77.

Year	Index numbers
1970	100
1971	$(100 - 12.2) = 87.8$
1972	$97.5 \times 87.8 = 85.6$
1973	100
1974	$102.8 \times 85.6 = 88.0$
1975	$101 \times 88 = 88.9$
1976	$106.1 \times 88.9 = 94.3$
1977	$115.1 \times 94.3 = 108.5$

(To be concluded)

FOR & AGAINST

Should We Have The Right To Die?

The word *euthanasia* is derived from the Greek words *eu* meaning *pleasing* and *thanatos* meaning *death*. There are times in almost everyone's life when the person is so depressed, whatever the reason, that he wishes to die. All over the world, today, debate is going on, whether a person has the right to die. One of man's fundamental rights is his right to live. Can he now be given a fundamental right to end his life if he chooses to do so? The debate has spread to India, too. On Jul 6, the Maharashtra Legislative Council admitted a motion to circulate a Bill for eliciting public opinion on conferring the right to die. There are many points in favour of the issue and many against.

For

■ With the advent of powerful drugs, mechanical devices, surgical advances and implant of others' or artificial organs, people are sometimes kept clinically alive for years. They may feel mentally tortured because they may not be capable of doing anything on their own. Hence they may wish to die.

■ If a person has an incurable disease, which worsens progressively and becomes more painful, he may be given the choice to die.

■ Abortion is allowed in many countries. Here, the mother is given the right to kill an unborn child without its consent. How then, can the right to choose between life and death be withdrawn from a conscious person?

■ Certain individuals with psychiatric disorders undergo physical and mental torture and do not obtain adequate relief despite the best medical efforts. Under such circumstances, mercy killing is a welcome alternative.

■ Capital punishment and declaration of war involve decisions on other people's lives. These are taken in the larger interests of the people. Can an individual, therefore, be denied the right to end his own life in his own interests?

ESSAYS

(Continued from page 64)

will desert it and move to another land, another place.

The ecology of mountains is a delicate miracle of nature. Such reckless devastation of hill vegetation by jhum farmers will have disastrous consequences—soil erosion, silting of river beds and floods leading to more soil erosion. The most conspicuous result is, of course, the loss of arable land year by year to expanding deserts. Those who practise jhumming are among the most wretched and primitive of Indian farmers. In the north-east region alone, some 4,92,000 farmers practise this nearly nomadic form of cultivation, affecting an area of 26,94,000 hectares. It is against this rather grim backdrop that scientists at the Indian Council of Agricultural Research (ICAR) are devising alternatives to shifting cultivation and means to emancipate jhum farmers.

Improvement of jhumming was studied in terms of improved crop

strains and use of fertilisers, weed control and control of soil erosion. Contour bunds in jhum lands check soil loss to a great extent and if continuously farmed upon the lands could turn into thick and lush bench terraces. High-yielding crop varieties to replace the traditional ones have been identified. Studies have revealed that the ideal period for sowing is between April and first week of May, and that granular fertilisers, sown alongside the seeds, trigger a 50-60% increase in the yield. Further, researchers have shown that watershed-based farming in concert with appropriate production technology (land-use) and provisions for subsidiary sources of income can provide an ideal alternative to shifting agriculture.

The main crops grown on hill slopes are paddy and maize alternated with minor crops such as finger millet, fox tail millet, beans, tapioca, yam, banana, sweet potato, ginger, cotton, tobacco, chillies, sesamum and vegetables. These crops have to be mixed with one another and sown

Against

■ Even though the doctors may declare a person as a terminal case he might recover miraculously. By giving the patient the right to die, one would withdraw all his chances of recovery.

■ Suicidal fits are caused sometimes by extensive depression. Quite often persons do not commit suicide because it is illegal and they would be punished if they were unsuccessful in their attempts. Conceding the right to die would increase the suicide rate all over the world.

■ From the religious point of view, suicide has long been considered a grievous sin by all religions. Since we do not know much about thereafter, should we tamper with the laws of nature and indulge in unnatural death.

■ It would also make people more irresponsible, since they would know that there was an easy way out in case of problems. Debtors, poverty stricken people, criminals, etc could all follow the escapist route with ease. This could also create complications in the legal field since criminals could demand the right to die instead of facing punishment.

■ The saying goes that where there is life, there is hope. Is it right to take away hope, by giving people the right to die?

S B.

according to a planned land-use model to get the best results. A five-year long study by ICAR has revealed that cultivation on scientifically prescribed land-use patterns led to a dramatic improvement in yields. The pattern found most suitable was agriculture on bench terraces and foresting crops on upper hill slopes. Ragi and maize can be grown on upper terraces and rice raised on lower terraces, for assured yields. Besides, rabi crops such as urad and mustard could be cultivated as second crops under rainfed conditions. The experimenters observed that double cropping of maize and urad is extremely profitable.

The efforts of ICAR scientists have proved that jhumming can be arrested and farmers uplifted. It has placed in our hands the technology and the know-how to reverse a practice with an age-old history. For the farmers in these regions time has stood still for innumerable years, and by continued jhumming, they are perpetuating their misery.

S. R.

TEN YEARS IN RETROSPECT

BY SANJUKTA BANERJI

Recently Nairobi was a women's world. Women from all corners of the globe streamed into Nairobi to participate in a conference marking the end of the UN Decade For Women (1975-85). The conference reviewed the achievements of the last 10 years and discussed ways to further improve the condition of women. Here is a report on the conference based on an interview with Neerja Chaudhuri, the Civil Rights correspondent of *The Statesman* and a part of India's delegation at the conference.

For 10 years the UN tried to focus on women's problems and turned the world's attention to the other half of the population of the globe. The period 1975 to 1985 was declared the UN Decade For Women. Women's organisations sprouted up in every country and funds flowed in, not only from the UN, but from several other funding agencies. It was at Nairobi that they all assembled—delegations from every conceivable part of the world—and discussed not only the past and the present, but also the future of women the world over. The Nairobi Conference marks the end of the UN Decade For Women.

What were the gains made during this decade? Researches have found that although inequalities still exist, giant strides have been made towards bringing about equality in societies. Literacy and life expectancy rates have gone up and during the decade, 90% of the governments all over the world have passed equal employment legislations or have incorporated equality clauses in their constitutions. Further, most governments have introduced mechanisms to oversee that women get equal treatment. In India, for instance, there is the Ministry for Social and Women's Welfare.

According to Neerja Chaudhuri, the Civil Rights correspondent of *The Statesman* and one of India's delegates to the Nairobi Conference, the major achievement of the decade was world-wide awareness of women's issues. Today the women's question—basic dignity and equal rights—has global significance and is no longer a marginal or peripheral issue. As Neerja pointed out, "Seldom in history has one idea gripped the globe like this." However, the decade has also documented the existing inequalities, she said. Women performed

two-thirds of the world's work, but earned only one-tenth of the income and owned less than one-hundredth of the property.

One of the striking features of the Nairobi Conference was the lack of emphasis on the man-woman interpersonal relationship. Neerja pointed out that although this is important people seem to have realised that women's issues do not revolve around this alone; and in the much wider struggle for a more equitable society the co-operation of men is indispensable.

At Nairobi, a large number of issues were discussed, for instance, famine, apartheid, violence against women in all its manifestations including dowry deaths and forced prostitution, health, employment, the adverse effect of some pharmaceuticals, agriculture, etc. However, what was striking about the conference was the wide presence of Third World women and their endeavour to establish a link between rural women and the world. The Third World women asserted that developmental issues cannot be divorced from what are uniquely women's issues.

But what did we, Indian women, get out of the women's decade? Most would agree that even today, the women's issues are "soft" issues in India. In fact, women in India face a triple exploitation—that of caste, class and the exploitation that is peculiar to women, regardless of class or caste. Neerja, however, was somewhat optimistic because of the dynamism shown by workers of the women's movement, who have been trying to arouse consciousness not only in the urban areas but also amongst rural people. However, change in attitudes is vital and for this a frontal attack is required. Neerja suggested that the media could help in this respect by raising the awareness of the people.

Although we have come a long way, we still have a longer distance to cover. The last decade raised the consciousness of people, and now what is required is the implementation of programmes and policies which will ensure the equality of women in every sphere, social, political and economic. What is needed now is more action and less advocacy.

INDIA'S NUCLEAR OPTION

(Continued from page 65)

own frontiers. They have taken the responsibility of defending friendly nations and allies all over the world.

The economic factor may silence those who give the 'poverty-first' argument, but the fact is a broad nuclear programme with submarine-based nuclear warheads and overkill capabilities cannot in any case be suggested for India. The best approach for us should be that adopted by France: a few bombs, meant only for defence against any possible nuclear attack. What De Gaulle said: "If someone attacks us we will hack one arm off the aggressor," should be true for us. If India adopts such a strategy, its defence budget will not be very different from what it is today.

A political weapon: Nuclear weapons have become obsolete as a tool of warfare. These arms are solely political weapons, "weapons of terror," and are useless since their use would annihilate the user. But they can be used as a potent weapon to blackmail non-nuclear states. "If India abstains from making the bomb while Pakistan makes it, it will lay itself open to nuclear blackmail," feels Zuberi.

There are, of course, dissenters. They believe that if India makes the bomb it will irrevocably alter the security environment of this region. They contend that India, owing to its geopolitical situation, sets the political and social pace among the South Asian nations, and if it goes nuclear the other nations of the region will follow suit making South Asia as vulnerable to a nuclear holocaust as Europe is today. A nuclear India, they feel, will launch an entirely new set of diplomatic and military forces in the region.

As to the political uses of the weapon, this school feels that "if you need a gun to sell a cause, it is not worth selling." And Muchkund Dubey, India's permanent representative in the UN in Geneva, believes that "deterrence is the biggest conceptual fraud devised in all history; it feeds on fear and deception and has the effect of eroding trust."

All this is good, moral stuff, but can we entrust over security to the supposed goodwill of other nations, especially a nation that has attacked us thrice in the last 40 years? The basic question is that if India is attacked with nuclear weapons, can it defend itself with the defence system it has? In all probability if we produce a "bomb" we will never have to face a nuclear conflict.

Coffee

Break

RAJANI...



The female of the species is deadlier than the male. Or at least, the Rajani of the species is! As is proved episode after episode every Sunday morning. Much to the delight of her already large fan following all over the country and to the chagrin of those who come into her line of attack.

The recent commercialisation of the Indian TV and the subsequent mass addiction to TV serials resulted in a virtual flooding of the small screen with serials of all shapes and sizes. Producers, manufacturers and advertisers, eager to dabble their hands in what promised to be a lucrative venture, began spewing out sponsored programmes by the dozen. *Rajani* too began as yet another hastily made inane TV serial. But it took only a couple of episodes to make it one of the most popular programmes. Made by Basu Chatterji, noted film director, *Rajani* is characterised by his distinctive touch of witticism and humour. But what makes *Rajani* stand out in comparison to other similar ventures is that it is socially relevant even while being entertaining.

For Chatterji's *femme fatale* deals with the daily hassles ordinary urban middle-class people are struggling with. A crusader-in-arms, a modern Joan of Arc, she battles her way out of problems, and in the process exposes social evils and corruption prevalent in the various walks of urban life. Flattening wrong-doers

...THE ANGRY YOUNG WOMAN



Above: What's cooking? Rajani in her element pulling up a corrupt gas dealer. Above left: The face that waged a thousand wars.

with her sharp tongue, no-nonsense attitude, Rajani has become the angry young woman of Doordarshan—a superstar in her own capacity. And a trend-setter for the middle-class housewife as she handles one difficult situation after another week after week with alacrity and aplomb.

With the emergence of Rajani, Indian consumerism has also come of age. For she incites consumers not to take things lying down and fight against injustice, corruption and dishonesty. But what drew the apostle of action into the vortex of a controversy and catapulted her to fame were her encounters with a corrupt gas dealer and taxi-driver. In the now famous gas dealer episode, Rajani confronts a gas dealer doling out cooking gas cylinders to those who pay illegal premiums while consumers, queued up outside the depot, wait in vain. Not only does Rajani refuse to pay the premium, she has him jailed for dishonesty while she herself basks in the warmth of fire emanating from the cylinder she finally obtains—by just means! The screening of the episode had the All India LPG Distributors Federation clamouring for an apology for what

they called an unjust maligning of their trade. In the other equally famous episode, Rajani takes a cabbie for a ride—to the nearest police station. The taxi-driver who refused to take Rajani on a short fare lands himself in trouble when a determined Rajani not only refuses to vacate his taxi until he takes her to her destination, but also has him arrested for undue harassment. Incensed by the episode, 500 angry taxi-drivers demonstrated outside the Bombay offices of Doordarshan demanding an immediate apology for this alleged slandering of their reputation. Not that such controversies daunt Rajani, for she moves onto new battlefields every week.

And, in the process, has made Godrej products and Priya Tendulkar the actress who plays Rajani, household names. The impish-looking, light-eyed and long-haired Priya is not only a colourful person on screen—but off screen too. Nurturing ambitions of becoming a great painter, she breezed her way through art school, a printing press, and a bank. And then after short stints as restaurant hostess and Air India stewardess, she settled down to acting. And obviously she's doing a good job of it—for the Rajani role seems tailor made for her.

But whoever plays Rajani doesn't really matter. Programmes like this will be popular anyway. Motivating several Rajanis to emerge from their cocoons and join the crusade against social evils, Chatterji's new superwoman has heralded an era of meaningful entertainment on Indian TV which was fast becoming an idiot-box. And even if *Rajani* isn't here to stay, one only hopes that programmes like it are.

Jyotana Sharma, New Delhi

Make Believe

Once a curious young man went to a museum and asked a sculptor about his creation in sheer hard rock, an elephant.

"Will you please explain to me the easiest way to carve an elephant out of rock?"

"Er, well. First draw a picture, then take the measurements..."

"No sir, but I want to know the easiest way," interrupted the young man.

"Well, my young friend," said the sculptor, pointing at a hard rock. "...look at this plain rock, and chop off every part of it that does not make it an elephant. And you have an elephant coming out of it."

Shuchi Shukla, Lucknow

Father: How is my youngest son doing "history"? I was never a shining light at it.

Teacher: History is repeating itself.

Md. Sadique, Gaya.

From The Club Desk

The mail had many surprises in store for us this time. Each club had a new activity to report. While we were still marvelling at their enterprising efforts, in came the lead story:

Sanjiv Kumar, founder President of CCTimes Club, Allahabad (A-6) had cleared the Civil Services Exam (his all-India rank is 69) in his very first attempt this year. In his own words: "I wish to go on record by expressing my deep gratitude to CCTimes for its excellent coverage of news items, deep and incisive analysis of current events as well as features on the Indian cultural scene (dance, theatre, etc.)."

Equally eager for success in the IAS, CCTimes Club from Jalgaon (J-3/1) roped in local professors for guidance classes. Members were also encouraged to speak up on important GK topics. The club is looking for hints on what kind of help they could provide their members preparing for the Civil Services Mains. To begin with, you could have exhaustive newspaper and magazine reading sessions, noting information on all relevant topics, and updating one's awareness of current events, studying the lead write-ups on the editorial pages of dailies, maintaining clippings files for the General Studies paper, arranging for lectures by local professors (like you've done for the Prelims) and holding discussions on various national and international topics.

Now for some off-beat news. CCTimes Club, Digapahandi (D-6) went on a sightseeing tour to a nearby hill and discovered an ancient temple built in 1722 A.D. by a local king of the area. Indoors, they held a seminar on 'Development of the computer and its use in the present society. And arranged a marathon (six-hour long) symposium on Independence Day on 'The National Movement in India'.

CCTimes Club, Bijnore (B-9/1) has sent in a long activities report. They had organised an all-India Science essay contest. The topic—'We cannot do without Science'. It was followed by a district-level debate contest on 'Science has eroded moral values.' Then there was a GK quiz conducted on the pattern of QUIZ TIME; a poster exhibition on environmental pollution and its lethal effects on animal and bird life (where have all the 'dodo' gone?). Needless to say, there are no two opinions

A Rakesh Sharma in the making at Coimbatore.



about the 'Club of the Month' title.

Wisdom Rendezvous, Hyderabad (H-4/5) stretched its wings to book a 45-minute variety programme on Yuv Vani with AIR, Hyderabad. The items included were a skit on national integration, a group discussion on 'Impact of terrorism on a developing nation' and a quiz.

And how about this? CCTimes Club, NDRI, Karnal (K-18) has got permission to organise the Dr Sunderesan Memorial GK Trophy for an inter-college GK quiz contest. Dr Sunderesan was former director of NDRI who died about three months ago.

Here's another opportunity to display your writing skills. CCTimes Club, Jalandhar (J-10/3), is organising an essay competition on 'Youth and the 21st century'. Last date for sending entries: Nov 5.



QUIZ TIME: Award function of a quiz organised by CCTimes Club, Bijnore.

First prize winner gets Rs 100 in cash, second prize winner Rs 50 and the third prize winner Rs 25. The essay should not be more than 3,000 words in length. As for the photography contest announced by CCTimes Club, Coimbatore (C-8/1 and not C-8/10 as inadvertently published in our August issue) in August, its closing date has been extended to Oct 25. The club has been up to a lot more since the last time we heard from them—they donated about 5,000ml of blood to Coimbatore Medical College Hospital; they held an inter-collegiate painting competition in which about a hundred budding Ravi Vermas and Pablo Picassos participated; there was a fancy dress competition for school children where, who do you think walked in—none less than Rakesh Sharma, Jesus and Indira Gandhi!

Many more clubs have written in to us about their activities—the usual kind and off-beat. Some enterprising clubs have even sent in photographs which are being reproduced here. For those clubs which are looking for topics—'Should India go nuclear?' 'Should jobs be delinked from degrees?' (group discussions) 'The new education policy' and 'India in the 21st century' (seminars). 'International terrorism' could also be an interesting subject for debate as discovered by a new arrival, CCTimes Club, Banka (B-23).

We'll be back next month with more reports and suggestions.

Stars And Careers



If you were born between Sep 22 and Oct 22, the Sun on your birthday occupied Libra, the seventh sign of the zodiac. As such, Librans are well-balanced, amiable, very refined, great lovers of justice, and equable persons to live with. They are capable of taking a dispassionate view of life, seeing both sides of a subject very clearly. Endowed with an excellent perception, they are also sensitive, approbative, fond of pleasure, ambitious, generous, intuitive, harmonious and artistic. Librans love praise and produce further good results when admired and generally they deserve to be praised. Very sociable by nature, they always like to be associated with others.

Librans are healthier than most people. In fact, an instinct for sanity keeps most Librans mentally healthy and physically fit. The biggest threat to their health is over-indulgence, which can bring on obesity, stomach disorders and mottled skin. Ulcers harass many a Libran, caused not so much by worry as by abuse of the digestive system and the topsy-turvy emotional make-up.

People born under this sign will generally be successful as designers, artists, musicians, singers, librarians and secretaries. Professions which involve public-dealing suit Librans best. They are well-advised not to seek any trade or any profession which has fixity or permanency. Librans will get along very well with people born from Jan 21 to Feb 18 or from May 21 to Jun 20.

On Nov 17, Saturn will move to Sagittarius and stay there for more than two years. Uranus is already occupying this sign. Both these planets will be trine to the Libran natal Sun. This is a most remarkable position. And, if within the next two years, Librans fail to satisfy their aspirations, the fault will be entirely their own and not of the planetary influences. This combination will give them good health, robust self-confidence and intensify their desire to achieve some spectacular success. Jupiter and Mars will occasionally lend them much support. This position will not be available to any other sign of the zodiac. Librans must set their targets—short-term as well as long-term—and concentrate on achieving them. Resounding success is guaranteed.

Till January, Jupiter will be very favourable to Librans for establishing good rapport with their superiors and expanding their social circle. It is also a favourable period for marriage. Thereafter, Jupiter will brighten up their career prospects. The present contacts will prove very helpful in this regard. Around February and March next year, Mars will favour improvements in finances and may even bring windfalls. Around May and June, health may need more care.

Lachhman Das Madan, New Delhi

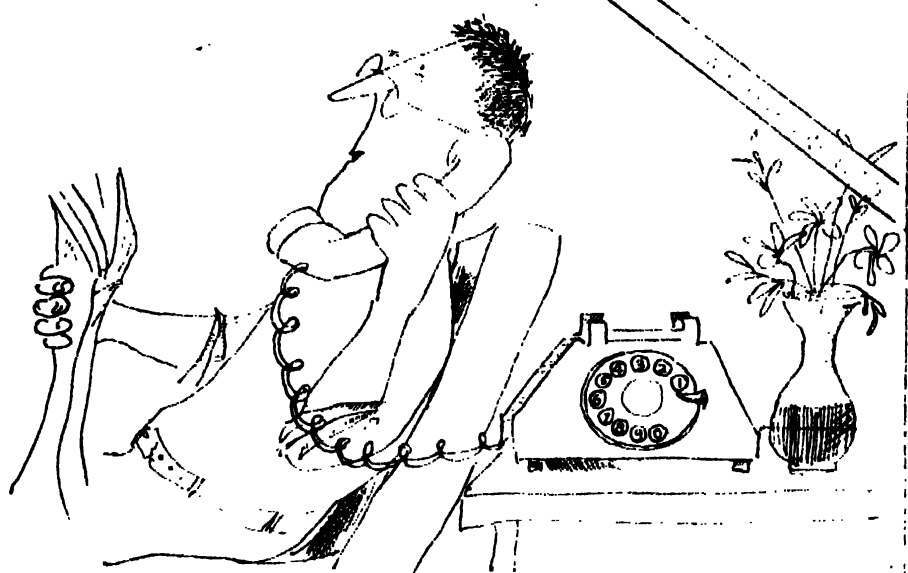
Word Play-I

BY RANI P. SOMAN

K	M	W	K	M	R	H	P	E	K	U
R	S	I	A	O	Y	U	H	L	N	T
T	A	D	Z	D	T	R	P	M	Y	K
H	R	W	E	O	A	G	U	I	O	Y
A	M	R	S	G	R	R	N	H	A	E
A	A	E	I	E	D	A	I	A	R	J
B	T	D	D	N	N	M	M	O	G	W
A	N	T	A	A	A	L	P	O	K	
A	R	V	U	A	B	A	B	N	V	A
M	I	T	L	C	G	A	K	U	N	G
R	B	M	A	N	L	C	D	T	H	Q
T	H	I	A	A	L	U	A	A	V	R
S	E	B	Y	L	A	P	C	G	P	W

The names of 16 Indian states and one Union territory are hidden in this grid. They have been set horizontally, vertically or diagonally, forwards or backwards. No letter has been used more than once. Can you spot them?

OBSERVE & DESERVE



MISLEADING

The man in GOPI GAJWANIS sketch is a consummate actor. Looking at him talking so animatedly, one would hardly guess that he is simulating a telephone conversation.

that's the only thing that he can do, under the circumstances. Wonder why? Do you know the answer? Write to the Editor, Career & Competition Times, New Delhi-110 002.

SOLUTIONS... SOLUTIONS... SOLUTION

KENWORDS-45

Across: 1. Bhagwan 5. Soda 7. Altham 9. Eri (umpire) 9. New (yen) 10. Choral 11. Tuber 14. Dad to Kunlur 17. Dawson 19. Tair 20. Armistice

Down: 1. Bad 2. Aachen 3. Whimsy 4. Ischa (Odissi) 6 O'Sullivan 7. Akal Takht 8. EEC 12. Lolita 13. Run 14. Dedari 15. Diwan 18. Ogle

Winners

First Prize (all-correct): 1. Atul Katana, New Delhi 2. Vineet Kaur, Patiala

Consolation Prize (all-correct): 1. A.V. Pavana Kumar Rao, Jamshedpur 2. Naar Ahmed Bakshi, Srinagar 3. M.S. Gowramma, Mysore 4. Rama Rao, Vadakattur, Kakinada 5. Pankaj Joshi, Pantnagar.

Prizes awarded by

Rupa & Co

831, Patodi House Road, Daryaganj, New Delhi-110 002

APPERCEPTION TEST-3

Gopi Gajwanis taxi was passing through an identity crisis. To be or not to be a taxi? For a taxi's registration number is written in black on a white plate and not vice versa.

Winners: 1. Uday Kumar G. Angadi, Dhawad. 2. Yogesh Bandhe, Bhilai.

Across: 1. Bhagwan 5. Soda 7. Altham 9. Eri (umpire) 9. New (yen) 10. Choral 11. Tuber 14. Dad to Kunlur 17. Dawson 19. Tair 20. Armistice

Prizes awarded by

Rupa & Co

831, Patodi House Road, Daryaganj, New Delhi-110 002

PRIZES

WORD PLAY-2

2 First Prizes

Jack Higgins' *Confessional*, Desmond Bagley's *Juggernaut* and Robin Cook's *Mind Bend* from **Rupa & Co., New Delhi** to the first two **all-correct** entries (or **one-error** entries, if there are no all-corrects) pulled out of the hat. **Plus 5 Consolation Prizes**—Desmond Bagley's *Night Of Error* from **Rupa & Co.**

APPERCEPTION TEST-5

10 First Prizes

An exciting package from **Rupa & Co., New Delhi** to the **correct** entries pulled out of the

NEW PRIZES

● **Consolation Prizes**—Desmond Bagley's *Night Of Error* from **Rupa & Co.** to the first two **all-correct** entries (or **one-error** entries, if there are no all-corrects) pulled out of the hat.

● **Consolation Prizes**—Desmond Bagley's *Night Of Error* from **Rupa & Co.** to the first two **all-correct** entries (or **one-error** entries, if there are no all-corrects) pulled out of the hat.

● **Consolation Prizes**—Desmond Bagley's *Night Of Error* from **Rupa & Co.** to the first two **all-correct** entries (or **one-error** entries, if there are no all-corrects) pulled out of the hat.

Closing date for the contests: October 20

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"Need we kill humans to keep our gods alive? To change India for the better, let's

begin with the Indian you know best. Yourself"—a simple yet powerful message that formed part of a campaign that was adjudged winner of the cash prize for 'Inspired Copy Writing'.

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Top: Eye-openers: Crucial problems of the day are effectively highlighted in this four-part campaign. Below: Triple exposure: Arun S. Gongade's award-winning three-part campaign on dowry deaths, prostitution and rape makes excellent use of mutilated photographs.



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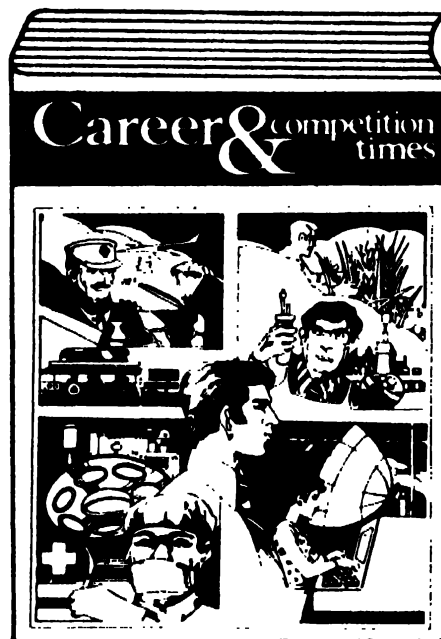
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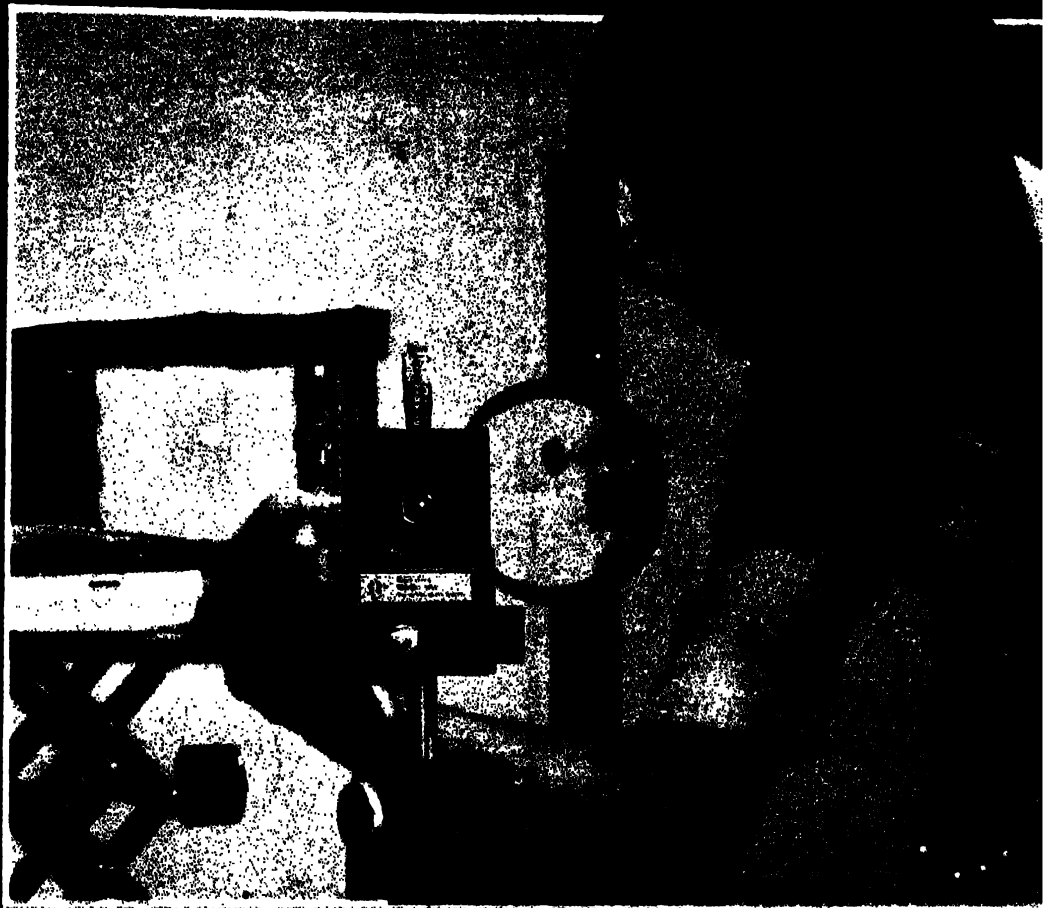
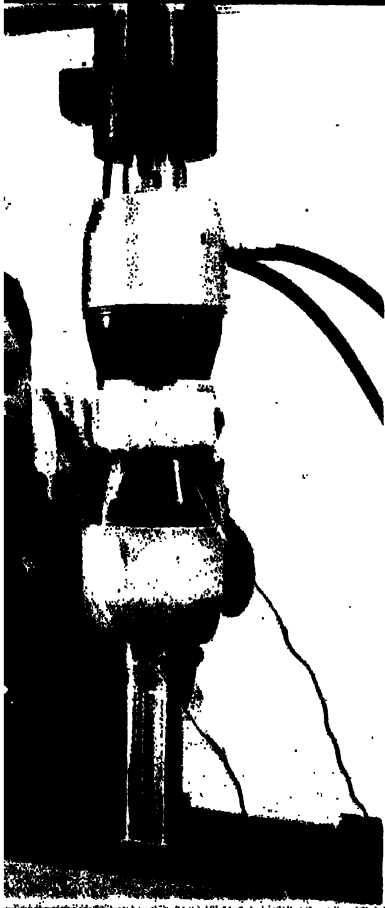
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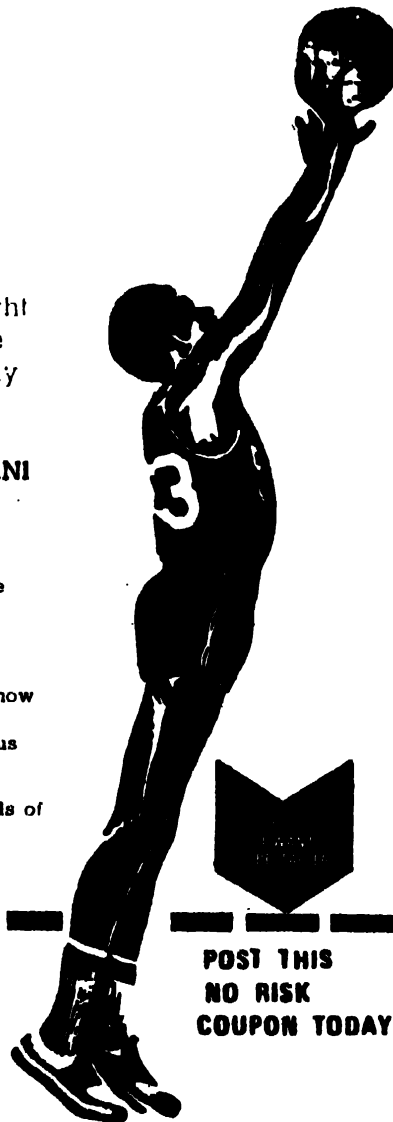
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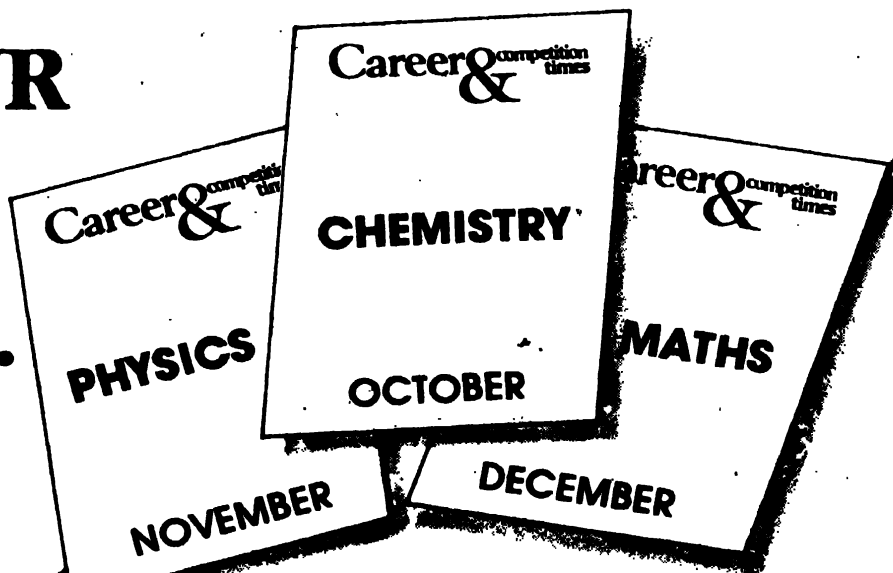
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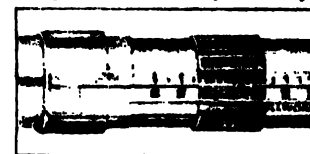
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Our Professional Commitment



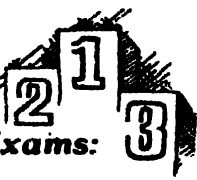
We coach in regular Courses at Bombay, Pune and by POSTAL TUITION throughout India for objective and descriptive test of PO exams. All subjects—(1) Reasoning (verbal, logical, non-verbal) (2) Quantitative Aptitude (3) General Awareness and Current Affairs (4) English Comprehension (5) Essays, letters, precis writing—are covered exhaustively. Specialised practice books on all subjects covering thousands of typical and actual exam questions are supplied in the Course. These books are not sold to others.

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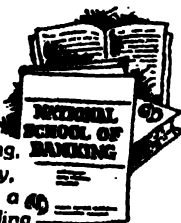
We are just a few years old but our successes have been noted across the country. Help and recognition have come from everywhere and in abundance. Test after test, hundreds of our students join the 20 Nationalised Banks, State Bank, Associate Banks, LIC, GIC, ECGC as Officers. The subjects, syllabus, pattern of tests and examining body (NIBM) for all these exams are same. Naturally we have a single common BRPO course for all these exams. Success-oriented students join the Course well in advance of the test and benefit by our step-by-step and exhaustive coaching. Admissions are open round the year but the number of admissions is limited to the number of vacancies declared by Banks.

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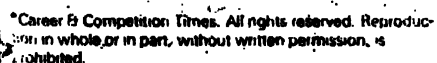
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LETTERS

Pollution And Morals

If moral pollution can be eliminated from the world, all other pollutions like air pollution, water pollution, sound pollution, and nuclear pollution will be automatically eliminated

K.L. Choudhary, Indore

Best Letter: Rs 40

Peace Without, Violence Within

India is said to be an apostle of peace. She appeals for global peace and brotherhood. But it is the cult of violence which is threatening her very existence.

Rajiv Dutta, Muzaffarpur

Prize-winning Letter: Rs 25

No Cure For Enduring Problems

In remedying the problems which continue to plague the lives of millions in India, the politicians in power follow the principle—what can be endured must not be cured

Shibendu Chattopadhyay, Chakdighi (Burdwan)

Legal Disorder

The more the number of laws passed, the worse is the law and order situation in the country. Is there an inverse relationship between law and order?

V.K. Barak, Dhanbad

Man—A Paradox?

It is rather paradoxical that while man has made spectacular progress in the field of science and technology representing unparalleled development of the superior human intellect, at heart he is still uncivilised. He has not been able to overcome the lower human instincts, such as violence, hatred and lust for power!

Sushrut Pant, New Delhi

Intelligence In Fits And Starts

The recent bomb incidents, not to speak of the earlier traumatic events, are a very sad commentary on the state of affairs. When something sensational happens our intelligence becomes the epitome of vigilance. The moment there is a semblance of normalcy it falls into a coma.

K.S. Viswanathan, New Delhi

Irony In World's Priorities

One million dollars are being spent every minute by developed countries of the world for defence equipment. An equal number of children die daily in the Third World and in other underdeveloped countries due to malnutrition. When will the world learn to be more balanced and practical?

Pradeep Shenoy, Belgium

Nuclear Explosion To Curb Population Explosion

Is the nuclear bomb being made today by more countries in the world to counter population boom?

Lakshmi Kamalakar, New Delhi

Pavement Dwellers And Democracy

As regards the much debated topic *Should Pavement Dwellers Be Evicted?* (Sep '85), in a democracy, every issue should be judged with the intention of doing the greatest good to the largest number of people.

Now the pavement is not meant for dwelling because it becomes unhygienic and affects the health of the common people. So what the opposers of the proposition are trying to do is nothing but asking the common man to sacrifice his civic amenities.

Prabir Kumar Samanta, Calcutta

Always Tomorrow!

Almost the same Punjab accord could have been signed in 1982. Also a similar accord on Assam could have been reached in 1980. Procrastination is an old habit of Indian politicians.

Pradip Samantary, Bhubaneswar

Solved Problems Unsolved

Rajiv Gandhi solved the Assam and Punjab problems. Adding one more feather to his cap. But even after solving the problems they remain problems.

M. Sultan, Patna

Futility Of Paper Accords

The Punjab accord led to a chain reaction of three brutal murders in the capital. This only goes to prove that the signing of a few papers cannot solve the present problems. Effective measures have to be taken at the appropriate time and place to prevent such heinous crimes.

Bharat Parasher, Delhi

For The Indian Consumer

In *Hello Folks* (Sep '85) you have correctly pointed out that the Indian consumer is neither alert nor bothered about what he wants. He is not completely at fault. If India also has an open market like in the US, local producers will become more alert and will try to improve the quality of goods and at the same time they will also reduce the prices of consumer goods.

K. Jai Shankar, New Delhi

In my view, a consumer cannot fight on his own. A consumer who protests is harassed. A group of consumers who form a consumer organisation can perhaps help in this regard.

R. Rajesh Gupta, Ahmedabad

Superpower Chess Game

The US Government's dual policy regarding South Africa, Lebanon, El Salvador, Pakistan, and Russia's dual policy towards Afghanistan, Vietnam, North Korea and Nicaragua reveals that today's international polity has become a chess game.

Sanjay Pandey, New Delhi

Bombed Peace

With reference to *The Day After* (Sep '85), I would like to emphasise that the world wants peace

but through the bomb! Apparently we want a planet where there will be peace, grey ash and silence.

Darla Singh Yadav, Kota

Festival Of India In India?

In *Festival Of India* (Sep '85), the writer has mentioned several important and significant facts unknown to many of us, about the Mahabharata, our folk and classical dances, Indian art and architecture, etc. So should there not be an exhibition or festival in India to make us aware of our rich cultural heritage?

Vineet Chandra Tiwary, Varanasi

Game Of The Ruling Elite?

The extravaganza that the 'Festival of India' is, expresses the ruling elite's ability to exploit the decorative value of our culture. The real India after all does not consist of pleasant half-truths dished out with an exotic flavour.

Vinod Kumar Sinha, Patna

India Through A Dreamer's Eyes

With reference to the Festival of India, India is not a country with dust, heat, snake charmers, cock fighters, naked begging children and filthy places. It is beautiful. It is ebullient. It is lovable.

Samidha, Manipur

Surfeit Of Education Policies

It seems Indian efforts at education are limited to changing educational policies. Education is barely having an effect on the character of individuals.

Sanjoy Sanyal, Calcutta

Utterly Ridiculous!

A modern employer is one who is looking for men and women between 25 and 30 with 45 years of working experience.

Shiv Pratap Singh, Aligarh

P.S. Bhatnagar

I was delighted to read the article on P.S. Bhatnagar. It is amazing that such a high profile official keeps his literary penchant alive amidst his busy working schedules.

B.G. Gnanadev, Molakalmuru

COVER CREDIT

Our October issue cover transparency (Boris Becker) is credited to *Sportsworld*.

WIN A PRIZE

Do our articles provoke you to say something? Is there anything else you feel strongly about? Here's your chance to say it and make some money in the bargain. The best letter will win Rs 40, the second Rs 25.

So, why don't you get cracking?

Your letters should be legibly written/typed, not exceed 200 words and include your full name and address. We may edit them for purposes of clarity or space.

Hello folks...



The candidate just cannot afford to play loose with time. Inefficient time-management has spelt the downfall of many a brilliant aspirant," a freshly admitted student of IIM Ahmedabad told Vijay Konwar. Realising that time is an important resource, I walked across the street to find a book on time-management. I could lay my hands on *Time-Management For Executives* by Lauren Robert Januz and Susan K. Jones (Rupa & Co. 3831 Pataudi House Road, Daryaganj, New Delhi 110 002). Though titled 'for executives' and written for the Western readership, I found it useful.

Managing time is everybody's number one problem, says Peter F. Drukker, the father of management studies. Those who really want to achieve results do not plan their work, they plan their time. If you manage your time effectively you can work faster. Not only that, you can find sufficient time for relaxation and recreation.

God, the greatest socialist, provided equal time to all—rich and poor, intelligent and ignorant, accomplished and unskilled. Although you cannot expand the 24-hour day, you can train yourself to do more in less time without being fatigued or losing effectiveness. The key to good time-management is to work faster, and not harder. This applies as much to your method of getting dressed for work as it does to planning your studies before preparing for or even appearing for the exams. Remember time is not a free gift. Time is as valuable as money. Therefore think in terms of spending time like a careful consumer to get the best value

for it."

Take a closer look at the time at your disposal so that you can avoid wasteful activities. Drop those activities and chores that are of no use to you immediately. You will get more time for things that are really important to you, your career and your family. Better time-management will improve your effectiveness and you would soon find that you have enough time for sports, books, and other enjoyable activities. Do not think that if you become busy, you would be making your life unhappy. Studies show that the happiest people are busy people.

Goal-setting is the first step towards effective use of time. Select a comfortable time horizon. Do not sulk when you are not able to achieve your target within a stipulated time period. Try to analyse the reasons for the delay and reallocate the time, more realistically and effectively the next time you undertake the same work.

Always think in terms of specific results. For instance, when you are planning your day's activities, do not decide that you would read a book on Economics from 6 p.m. to 8 p.m. Instead try to read a definite number of pages of the book in the two hours. Be realistic and fix your goals keeping in mind your capacity and competence.

Arrange your work. Once you have a place for every work and every work in its place, it would be easier for you to concentrate on one job at a time.

To make time-management more realistic, try a four-step strategy:

- Identify immediate targets you want to achieve.
- Select a proper strategy that will enable you to hit each target.
- Develop a plan to put the strategy into action.
- Try to split the plan into easy actionable steps.

In order to manage your time effectively, you must know yourself. Take advantage of your plus points and favourable factors and plan to overcome your shortcomings. Before planning, ask yourself a few questions: Are you a morning person or a night person; task oriented or people-oriented; an intensive worker or an extensive worker; compulsive worker or a deliberative worker?

If you are a morning person, a nine-to-five schedule is the best for you. The night person would love to work late in the evening and early night. Task-oriented people love knotty, long-term problems while the people-oriented avoid paper

work and long-term tasks. The intensive worker cannot work long hours, the extensive person is slow and steady and needs no breaks during the work. The compulsive worker wants to do everything personally and the deliberative one uses his contacts and relationships.

Another effective method of time-management is to take a small chunk of the job and do it right away. Decide quickly whether or not you can do it. If you can't do it, drop it immediately. However, do not drop everything.

Improve the quantity and quality of your work with the help of the sprinting concept. Select a few days in a row. Start early and work late at full speed. After three-four days of sprinting, return to your normal schedule. It would definitely become faster and more efficient than before. Whenever you feel that your capacity is beginning to drop, schedule a sprinting season again.

Increase your work capacity by concentrating more effectively. Adopt the four-step strategy of increasing your concentration. Prepare yourself well for the work; concentrate on a task until you reach a logical or natural break; try your mind for action by reading or discussing the basics of the project until you understand it thoroughly; keep a record of your performance at various intervals.

Have a definite deadline. If you do not meet deadlines, take steps to find out why you are unable to do so. Analyse factors that contributed to your failure. Do not let these mistakes happen again. The deadlines should be far enough to allow for effective performance. Learn to take a decision and deal with the consequences.

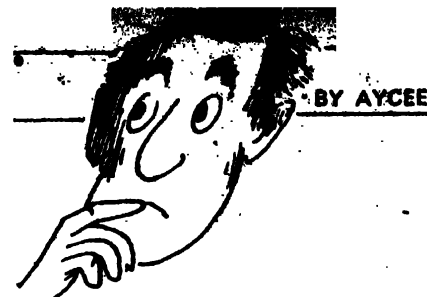
Here is how to use a daily plan in practice: Consult the plan before you start your task. Keep the plan on your desk or pin it on the wall in front of you. Score your performance at the end of the day. Try to make long-term plans gradually.

Some time-wasters are: boredom, too many ideas, lack of confidence, over-confidence, thoughtlessness and indecisiveness.

The best way to avoid emergencies is to plan ahead so that you can anticipate some problems and solve them in advance.

Editorial

TEST YOUR WORD POWER



The per-fect WORD. Is it on the tip of your tongue or is it hidden in the back of your mind? Either way, we agree, it's an eloquent problem.

And so each month we bring you this column, tailor made to suit your requirements. Twenty new words complete with their meanings and usage.

But what's so unique about our word power exercise? The 20 sentences are information-packed and fact-laden—facts which are often not easily available. A weighty two-in-one package, wouldn't you agree?

Tick the word or phrase you believe is *nearest in meaning* to the key word.

- binary:** A: of two-lenses B: involving a pair C: having two chambers D: lasting for two years
- caricature:** A: to represent so as to make ridiculous B: mislead C: describe D: weaken the confidence of
- dispel:** A: to clear B: get rid of C: detach D: put out of order
- emblazon:** A: to adorn richly B: give form C: preserve from decay D: raise the hopes of
- endorse:** A: to approve B: possess naturally C: make sure D: add to the value
- forlorn:** A: feeble B: helpless C: forsaken D: impossible
- fountainhead:** A: basis B: establishment C: original source D: bust
- hideous:** A: secretive B: very ugly C: foul-smelling D: disagreeable
- indignation:** A: rude treatment causing shame B: absence of interest C: anger caused by injustice D: wrongful act
- juxtapose:** A: to place side by side B: stand out from C: uncover D: enlarge
- monastery:** A: place of worship B: isolated place C: sacred tower of pyramidal form D: a place where monks live in seclusion
- morass:** A: small green plant B: state of mind C: tiny piece D: a difficult situation
- neurosis:** A: emotional imbalance B: study of nervous disease C: just punishment D: functional nervous disease
- nonchalance:** A: state of being uninformed B: recompense C: unconcern D: daring
- notch:** A: to achieve B: report C: cancel D: applaud
- propitiate:** A: to appease B: give in or submit C: put forward D: foretell
- scribe:** A: community B: letter C: writer D: manuscript
- swap:** A: to exchange B: wrap up properly C: clear up D: hit hard
- toll:** A: instrument B: value C: punishment D: a grievous or ruinous price
- tribulation:** A: grief B: place of judgment C: excited state of mind D: dilemma

(Answers on page 62)

THOUGHTS

Here's some food for thought...provided you pause to ponder over it. These passing thoughts on various social, political and economic issues, expressed by a few observant minds, often portray the bare realities of life. They may even set your thought processes in motion!

There was jubilation in the streets of Kampala when Uganda's President Milton Obote was overthrown by Gen. Idi Amin in 1971. There was jubilation again when Ugandan guerrillas drove Amin out to pave the way for Obote's return. But last month when Obote was overthrown there was no jubilation.

Hilary M. Wynne in Newsweek

The Bhagwad Gita is easier to understand after a bit of reading, but the more you read tax laws the more difficult they become.

N.K.S. Salve in Rajya Sabha

Last a diplomat now... My challenges have now changed too. I have to wade through mountains of papers and my route is littered with hazards of

frequent cocktail parties.

Sir Edmund Hillary

In Bombay, the higher the buildings the lower is the quality of human life.

A.F.S. Tayekhan in Celebrity

A dancer has her ego—you cannot dance with a deflated ego.

Yamini Krishnamurthy in Femina

I have no personality at all—I seem to look different everyday.

Priya Tendulkar in Bombay

I am not a gentleman. I am a communist.

Ashok Mitra (Finance Minister, West Bengal) in The Illustrated Weekly of India

The Japanese have acquired global responsibilities before being psychologically and politically capable of discharging them. And Americans cannot live with the idea that a nation they defeated in war now challenges them economically.

Robert J. Samuelson in Newsweek

What the world saw after Hiroshima was a fearful vision of the future.

Time

Everything faces forward, except that the name of the city (Hiroshima) can never be mentioned without invoking a past to which everyone is attached. Hiroshima survives in the mind, which broods, denies, forgets and eventually must deal with what it saw.

Time

Few can remember the witty remarks made by Mrs Gandhi—she made so few of them.

India Today

There could, paradoxically, be no better way of keeping alive the memory of the late PM Indira Gandhi than by the various hearings and commissions established to probe the manner of her death.

India Today

We are wary of large companies—remember the British East India Co.

Rajiv Gandhi in an interview with Newsweek

....your (Indian) PM has asked for my school to be closed down. Strange reaction from a man whose life I've just saved, risking my own.

Frank Camper in The Illustrated Weekly

QUOTABLE QUOTES

Tell me what you are busy about and I will tell you what you are.

Goethe

Happiness is belonging, not belongings.

Elizabeth Harvey

He that has a secret should not only hide it but hide that he has to hide it.

Thomas Carlyle

Success covers a multitude of blunders.

G. Bernard Shaw

Some people don't play the major role even in their own lives.

Muncher Medazin

Fortune brings in some boats that are not steered.

William Shakespeare

We always like those who admire us but we don't always like those we admire.

Duc De La Rochefoucauld

Sometimes the difference between a good speaker and poor speaker is a comfortable nap.

G.A.B.

Mincing your words makes it easier if you have to eat them later.

F.P.J.

Today's stress is tomorrow's good old days.

Frankfurter

The rung of a ladder was never meant to rest upon, but only to hold a man's foot long enough to put the other somewhat higher.

Faulkner

TECHNOLOGY AND INDIA

Riding the high wave of technology India approaches the 21st century. From indigenising nuclear reactors to inducting information technology, it has traversed a remarkable distance.

Where does Indian technology stand now? An analysis.

AN OVERVIEW

Alarm bells are ringing in scientific circles, said a newspaper report recently, in the aftermath of liberalised policies on import of goods and technology. "Technology import has now come under de facto open general licence (O.G.L.)," says an official of the Council of Scientific and Industrial Research (C.S.I.R.). "The technology policy statement is dead and so is the C.S.I.R."

It is not as bad as all that, but the telltale signs are there. Last year, there were 70 requests for the processes of a national laboratory. This year there have been only four—quite a comedown. A number of small factories making products licensed by one or the other of C.S.I.R. laboratories are about to close down since better products of the same kind can be imported from abroad under O.G.L. at lower prices.

A company like E.C.I.L. (Electronics Corporation of India Ltd) which makes a number of electronic products used in industry may have to go out of business, particularly out of the computer market, as better and more efficient computers can now be imported at a fraction of the price charged by E.C.I.L. and others. Then there is also the **phoren** syndrome. If Coca-Cola comes back, the bulk of the soft drink industry in the country can be wiped out in a jiffy. In fact, the foreign food industry can take over chunks of the food market in the country, just as some multinationals have nearly walked away with the baby food market.

But these are not new complaints. Businessmen have been complaining against the C.S.I.R. for years so much so that the Janata Government decided at one time to reorganise the research colossus and put it on a more commercial footing. Now the foot is on the other boot. With increasing modernisation, businessmen prefer buying new products and know-how for new products outside the country to getting stuck with local stuff. If the C.S.I.R. had built up a reputation for itself as an R & D agency delivering goods on par with those operating abroad, it would not have come to such a pass.

All these years, it has been riding high as a government body that is keener to stop the entry of technology from outside than develop and market its own. In fact, apart from half a dozen minor products and processes, the C.S.I.R. has nothing special to offer, and it has virtually no reputation outside India.

Twenty years ago, the Economic and Scientific research foundation of New Delhi said in one of its widely quoted research papers that the contribution of the C.S.I.R. that is, of indigenous technology, was worth no more than about one-hundredth or 1% of the country's national gross product. It also warned at the time that India was far behind the rest of the world in technology and would be left with junk on its hands if serious attempts at modernisation were not made.

During the past four decades of independence, India has contributed nothing worthwhile in the realm of modern technology, though its scientific institutions like I.I.T.s and C.S.I.R. laboratories have provided engineers and scientists to industry outside India. We have always had the men and the brains but never the kind of organisation that is needed to motivate them.

This is true not only of the C.S.I.R., which has come in for a great deal of flogging because it is so much in the public eye and because its scientists have been conspicuously irrelevant, but also of most other industrial organisations. Take the Tatas, or for that matter, any big business organisation. When the Tatas first put up their steel plant at Jamshedpur, it was done with the help of American engineers and designers, which is understandable considering that it was the first such plant to be built in India from scratch. But when in 1952 or thereabouts they decided to double the steel production capacity from one to two million tonnes, they went back again to the USA for new technology though admittedly, certain sections of the plant were put up with their own people. Since then there have been a couple of more attempts at modernisation, with a few more products thrown in but that, too, has been done with the help of imported know-how.

In fact, it can be said that there is not a single product—an industrial product, that is,—which is known as a distinctively Indian product, on which India has been able to build up an international reputation. We have done almost everything on the basis of imported know-how, that is, imported or borrowed ideas: whether it is Tata trucks, or I.C.I. polyester or Hindustan Lever's detergents. These are not Indian products, in the sense the automobile used to be known as an American product, or transistor radios had a worldwide reputation as Japanese products.

No technology is purely national, for technology is after all based on science and science is universal. But what is national is the technical and developmental effort that goes into it and transforms the know-how into a national product. With its vast scientific and technical force, said to be the third largest in the world, India has always been at the receiving end of technology and that is why it has suffered.

The C.S.I.R. scientists are perfectly justified in their tears, but it makes no sense to keep modern technology out of the country just to keep the 40-odd C.S.I.R. laboratories going. It is a law of nature that organisms without a properly defined function must wither away, and if that is what is going to happen to the C.S.I.R. and its laboratories, one can only say that nature is taking its course.

In fact, the head of a large business organisation which incidentally has a flourishing R & D set-up said as much recently, though he, or one of his representatives, used to sit on the governing board of the C.S.I.R.. "They very rarely discussed science or technology," he said. "All they were concerned about were the grades of malis and sweepers in some laboratory in Jorhat or Jammu, and whether so and so should be given a lump sum grant of Rs 345 or Rs 354 for buying a piece of equipment." The R & D effort in India has become so bureaucratised that its scientists are indistinguishable from babus. And when that happens and the urge to innovate dies, the organisation dies too.

TARUN DEY
Courtesy *The Tribune*

COMPUTERS

Essentially, a computer is a machine that can process, store and retrieve information. Electronic computers can perform these operations with extremely high speeds which makes them a versatile tool in the hands of man. World's first electronic computer ENIAC (Electronic Numerical Integrator And Calculator) was commissioned at the University of Pennsylvania in the US in 1946. ENIAC was a collection of 18,000 vacuum tubes, 70,000 resistors, 10,000 capacitors and 6,000 switches, and occupied the space of a two-car garage. When it worked, ENIAC could perform 5,000 additions or subtractions per second; but it worked only in short bursts because its tubes kept burning out! But the miracle 'chip' has changed all that. Today even a pocket calculator can perform all the operations that ENIAC could do and much more.

There are three basic components of an electronic computer: peripheral input and output devices, memory, and the central processing unit (CPU). Probably the most important part of any computer is the CPU, which provides the computer with arithmetic, logical and control capabilities. The arithmetic unit of the CPU provides the computer with the capability to carry out the simplest of the arithmetic operations—nothing more than addition, subtraction, multiplication and division. The computer solves all mathematical problems on the basis of these four simple operations. The logical operations are very little more than the ability to compare two numbers and determine whether they are equal, and, if unequal, which one is larger.

Associated very closely with the CPU is a storage unit, often called the memory. This unit receives data, stores it and supplies the data upon command from the CPU for processing. Together the primary storage and the CPU form the heart of any computer system.

Earlier computer memories were made up of minute rings of magnetic material inter-woven with wires. They have now been replaced by silicon 'chips' which can store much more data in much smaller space. Information is stored in terms of characters, each denoted by a set of eight binary digits or 'bits'. This is necessary because the computer works on the basis of whether millions of its electronic circuits are 'on' or 'off', which are the only two states possible. A set of eight bits is called a 'byte', which is a measure of computer memory. Exactly 1,024 bytes make a kilobyte and 1,000 kilobytes make one megabyte. Today's computers generally have a working memory between 32 kilo-

bytes and 512 kilobytes.

Computer memory is of two kinds. The built-in memory which the computer uses for its own functions and is indelibly pre-programmed by the manufacturer is called the Read Only Memory (ROM). ROM cannot be modified or changed by the user. The other type of computer memory is known as Random Access Memory (RAM) which is the real usable memory of the computer. It can be erased and added to by the user and is also known as user memory. The only problem with RAM is that it is lost when power is switched off.

Additional memory storage is provided in the form of magnetic tapes and discs. Modern computers mostly use discs of two kinds: floppy and hard. The floppy discs come in two sizes—3.5 inch which can store about 900 kilobytes and 5.5 inch discs with a capacity of storing about 1,400 kilobytes of data. The hard discs which are larger can store upto 10,000 kilobytes.

Communication between the computer and the user is possible through any of the several input/output channels. The input usually consists of a keyboard similar to that of a typewriter. It can also be a tape drive, or a punched-card or tape reader. The output is usually a TV monitor which displays the information fed in or the final outcome of an operation. Modern computers can also produce graphic designs as output. The output can also be in the form of a printout or recording on magnetic tape which can be stored for later use.

Contrary to common belief, a computer cannot think like human beings; it is capable only of carrying out instructions fed into it by the user. The instructions, written in special languages which can be followed by the computer's electronic circuits, are called 'programs'. A program directs the computer to follow a series of steps to accomplish a given task. If there is any error in the program the computer cannot by itself correct it. The greatest virtue of a computer is the extremely high speed at which it can carry out programmed instructions and its capacity to unfailingly remember millions of bits of data fed into its memory. Another advantage is that computers can be linked with one another in a network and data can be quickly transferred between them. Such networks now operate in banks, airline and railway reservation systems, police and intelligence networks and in business houses. Users with computer terminals at home can draw upon the vast amount of data stored in central main-frame computer.

While the capability of computers has increased manifold since the first chips came on the market, they still lack the intelligence which characterises human beings. But scientists are now trying to

design computers endowed with some sort of artificial intelligence (AI). AI programs called expert systems are in use that give advice to oil geologists interpreting seismic data and to doctors diagnosing illnesses. Japanese computer companies have developed machines that can render a crude English translation of a Japanese technical text. But true machine intelligence is still a far way off. Even the most powerful computers of today cannot function outside their limited though vast range of stored instructions fed into them by human operators. They would be unable to cope with even a simple situation if it is not stored in their memory, or if they are not programmed to deal with it. In the words of a leading computer scientist from M.I.T., "Even the amoeba is a far smaller and far more powerful information processor than today's best chips."

BIMAN BASU

THE CHIP

At the heart of today's electronic computers is the tiny 'chip'—a marvel of the new electronic age. At its simplest, the chip is electronic circuitry, patterned on a silicon base with thousands of transistors and other components linked by "wires" etched from extremely thin films of metal. A modern chip, only a quarter inch on a side, can hold as many as a million electronic components, ten times more than the 30-ton ENIAC did.

There are only a few companies in the world which manufacture chips for microprocessors and computers. In fact, chip making is a closely guarded technology to which only a few countries have access. But the basics of chip making are well known.

The raw material for the chip is silica, the glass-like crystalline rocks found in quarries and beach sand. Even rice husk can be used to produce silica. Silicon is extracted from silica (which is the oxide) by chemical processing. After purification, silicon can be melted and shaped into long cylindrical crystals. The single crystals so obtained are then sliced into thin wafers on which chips are made. Each slice of wafer only a few centimetres across may hold several hundred chips, each containing hundreds of thousands of microscopic transistors.

The chip making process starts with giving the wafer an oxide coating by heating them in a stream of oxygen. The oxide film forms an electrically insulating layer on the wafer. The conducting circuitry is etched into the wafer through a soft photographic emulsion (photoresist) which hardens on exposure to ultraviolet light. The method is similar to photographic printing. The pattern of transistors and

other components to be etched is made in the form of a scaled down photographic negative. When the coated wafer is exposed to ultraviolet light through the negative, also called the mask, the exposed areas of the sensitive coating harden into the proper outlines. Acids and solvent are then used to strip away the unexposed areas of the coating and oxide layer, thereby baring the patterned silicon for etching.

After etching, the wafers are 'baked' in an atmosphere of gases loaded with chemical impurities called 'dopants' that form the negative and positive conducting zones. These steps are repeated several times forming many layers of transistors. Modern chips contain upto 10 such layers. Conductive pathways are generally created by depositing aluminium onto the wafer. Finally, after all the processes have been gone through, the individual chips are cut out of the wafer for mounting.

The entire process is carried out in 'clean rooms', with workers donning special suits to prevent any impurities other than those deliberately added in measured quantities from contaminating the product. Even a minute speck of dust can render several hundred transistors on the chip ineffective.

Over the years the number of components packed into a single chip has grown tremendously. The first chip in 1971 carried 2,250 transistors. Today's 'very Large-Scale integration' chips contain more than 100,000 transistors each. By 1990, electronic engineers expect to squeeze 10 million transistors into the chip!

OCEAN DEVELOPMENT

B. B.

With land resources of the world becoming scarcer due to over-exploitation by man, the oceans, which cover almost three-fourths of the earth's surface, offer the last great resource on earth. While man has exploited ocean resources like fish and other marine products for ages, systematic scientific study of the oceans is a comparatively recent development. Today's oceanographers have at their disposal a wide range of tools and techniques to study ocean currents, nutrient concentration, temperature and productivity of oceans. Besides the use of sonar for detecting fish, techniques are now available for locating deposits of off-shore oil and valuable polymetallic nodules on the sea floor. While sonar uses underwater sound waves for locating an object, other techniques available today include undersea photography using remote controlled

television cameras, satellite imagery and the use of remote controlled deep sea robots.

Oceanography, the scientific study of the oceans, has many commercial applications today. For example, the design of an off-shore oil drilling platform must take into account the conditions it is likely to face during a working lifetime, and such information comes only from oceanographic research. The study of marine geology provides information about the location and extent of deposits of sand, gravel and other marine minerals. A knowledge of ocean currents can help the fishing industry in locating areas where good catches can be expected.

Oil and natural gas are among the most valuable resources obtained from the ocean today. They occur mostly in the off-shore continental shelf areas upto a depth of 200m. The shallow off-shore shelves are also known to contain very large quantities of minerals of economic importance. Normally these areas contain sediments such as sand and mud. But in many areas, large deposits of minerals such as phosphorites occur. Deposits of coal, tin, sulphur and even gold and alluvial diamonds have been found to occur in many shelf areas which can be easily dredged up.

On the whole, however, materials taken from the sea floor are far more mundane than diamonds or gold. They are more commonly sand, gravel and limestone. Apart from their direct use in the construction industry, sand and gravel are also used in land reclamation in many countries.

In recent years a new ocean resource has caught the world's attention—that of undersea deposits of polymetallic nodules. The ocean floor, particularly that of the Pacific and Indian Oceans, is spread with potato-shaped ferro-manganese nodules. Besides large quantities of manganese and iron, the nodules contain nickel, copper, cobalt, lead, molybdenum, cadmium, vanadium, titanium and other metals. The economic potential of these elements is so enormous that even minor fractions of some of them if recovered economically recovered could meet substantial demand of industries.

The polymetallic nodules are found at depths of 3,000m to 6,000m in all oceans of the world, and cover an area of 46m sq km. The total reserves of the nodules in the world oceans has been estimated at upto 3,000b tonnes.

Several methods, based on dredging techniques, have been developed for mining the nodules from the deep ocean floor. Three methods are known to be economically important. They are: 1. Hydraulic system; 2. Air-lift system; and 3. Continuous line bucket system. In addition, dredges have bucket ladders,

and clamshells with the dredging systems.

In the hydraulic lift system, two collecting heads suck the nodules and bring them up to the mining ship. The entire system works like a giant vacuum cleaner in water. The air lift system consists of a long pipe with a 'head' to collect the nodules from the ocean floor. Air under pressure is blown into the pipe to raise the nodules to the ship. The third method is more useful because it is simple, cheaper and efficient. The system consists of a long loop of cable with buckets attached to it, at intervals of about 25 metres. The long cable moves down to the ocean floor bringing the buckets in contact with the ocean floor from where the nodules are scooped up. On their return, the nodules are dumped into the collecting ship. The main advantage of the continuous line bucket system is that it can bring the nodules to the ship without causing much disturbance at the sea bed. But whatever be the method used, mining of nodules from depths of three to six kilometres is a big operation and involves considerable technology and resources. To make the mining operation economical, it is necessary to operate in an area where the deposits have high concentration of nodules.

Two methods are commonly used for the extraction of metals from the recovered nodules. They include the low temperature hydrometallurgical method which makes use of acids, ammonia and reducing agents such as iron and sulphur dioxide. The other method, known as the high temperature pyrometallurgical method, makes use of high temperature reduction, chlorination and smelting.

Besides off-shore deposits and deep sea nodules, ocean water contains a large number of dissolved minerals which can be commercially extracted. Three of them—salt, bromine and magnesium—are extracted on large scale throughout the world. Techniques for economic extraction of other chemicals are being developed.

B. B.

NUCLEAR ENERGY

The source of nuclear energy is the nucleus of the atom, unlike chemical energy (obtained from the burning of fossil fuels and wood) which comes mainly from reactions involving exchange of electrons lying in the outermost shell of the atom. But not all atoms can produce nuclear energy; only some of the heavy atoms with unstable nuclei such as those of isotopes uranium-233, uranium-235 and plutonium-239 can do so. Energy is liberated when the nucleus of any of these atoms captures a neutron and splits into

two smaller fragments and release more neutrons. The process is called 'nuclear fission'. The massive energy released in fission comes from the slight loss of mass which occurs when the heavy atom splits into lighter atoms. The amount of energy released is given by Albert Einstein's famous equation $E=mc^2$ where E is the energy released, m the mass lost and c the velocity of light.

As each fission process releases neutrons which are capable of triggering more fission and liberate more neutrons, a chain reaction is set up. If the amount of the fissionable material is more than a critical value, the chain reaction grows very rapidly and a nuclear explosion results. But the chain reaction can be controlled, and that is what is done in a nuclear reactor. By carefully controlling the rate of the chain reaction, the energy liberated can be kept within a safe limit, just sufficient for raising steam to run a generator to produce electricity. The scientific principle is simple, but putting it into use safely requires complex, highly sophisticated engineering.

Although several designs are in use, all nuclear reactors have certain features in common. They all have a core made up of the fuel material. All except a handful of the reactors in use around the world use some moderator to slow down the speed of neutrons liberated in the fission to make them more effective fissioning agents. They also use a coolant to carry away the heat of reaction from the core to a heat exchanger where the heat can be used for raising steam. All nuclear reactors also have a control system to regulate the chain system.

For all practical purposes, designers of fission reactors have a choice of three nuclear fuels: uranium-235, plutonium-239 and uranium-233. Uranium-235 is a natural isotope, which makes up only 0.7 per cent of the uranium extracted from ore. Plutonium is a man-made element which is produced in nuclear reactors by the action of neutrons on uranium-238 which makes up more than 99 per cent of natural uranium. Uranium-233 can be produced by irradiating the element thorium-232 with neutrons. At present most power generating nuclear reactors use either slightly purified or natural uranium as fuel.

Nuclear fuel, unlike any of the fossil fuels, such as coal, oil and natural gas, must be designed and fabricated with extremely high precision. The fuel used in most reactors in use today is not metallic uranium but one of its oxides called uranium dioxide (UO_2). The black powder is compressed into very dense pellets of precise dimensions (generally about 2.5 cm long and 1.25 cm in diameter). The pellets are then packed into long tubes made of aluminium, stainless steel or an

alloy of zirconium (zircaloy). The tubes, called 'cladding', serve two purposes. They prevent contamination of the coolant by highly radioactive fission products and also lend strength to the fuel and protect it from erosion by the coolant stream. The pellet-packed tubes, called 'fuel pins', are gathered into bundles of 100 to 200 to form 'fuel elements'. Scores of such fuel elements make up the core of a nuclear reactor.

The core assembly is designed in such a way that a coolant/moderator can be circulated between the fuel assemblies. Reactors using slightly purified uranium as fuel, like India's Tarapur plant, use ordinary water as both moderator and coolant. But reactors using natural uranium need 'heavy water'-tonnes of it—as moderator and coolant. The moderator can also be a solid such as graphite; here the coolant is normally a gas, mainly carbon dioxide. The coolant is normally circulated in a closed loop through a heat exchanger which transfers the heat to water producing steam.

The control system comprises mainly of substances which can absorb neutrons easily. Metals like cadmium, hafnium, gadolinium and europium are such substances. For use in a reactor, these materials are fabricated into rods or blades that can be made to slide up and down, in and out of the core or the reactor. As they are inserted further into the core, they absorb more and more neutrons, slowing down the chain reaction. Conversely, as they are pulled further and further out, the number of neutrons available for fission increases, and the reactor power level goes up. The control rods are operated by automatic systems. It is possible to shut down the reactor very rapidly in case of an emergency by quickly dropping all the control rods into the core—a process known as reactor 'scram'.

The energy output from a reactor can be measured directly as heat. Of this total heat used to generate electricity, only a fraction ultimately reappears as electrical energy; the rest is discharged to the surroundings as low-temperature heat. Generally, only some 25 to 35 per cent of the total heat output is converted into electricity in a nuclear power plant. Reactor energy outputs are accordingly described either as heat—for instance, "megawatts thermal" (MWt)—or as electricity—for instance, "megawatts electric" (MWe).

Unlike fossil fuel powered plants which use up all the fuel and produce waste products like ash, carbon dioxide, and other gases, nuclear reactors hardly use up one tenth of the fissionable material before they need refuelling. The main reason for this is a build-up of waste products in the fuel element which absorbs neutrons

from the fission process. The total fuel must be replaced primarily during the expected 30 to 40-year life of the reactor. Many reactors need complete shut-down before refuelling can be done. But those of the CANDU design, which use natural uranium fuel and heavy water moderator, can be refuelled while the reactor is in operation. All Indian reactors, except those at Tarapur, are based on this design.

One feature distinguishes nuclear power technology from all others; the leftovers. Unlike the ash, say, from a coal-fired power station, the used fuel from a nuclear power station cannot be just thrown away; it contains not only unspent fissionable material and plutonium but also highly radioactive waste. Plutonium and the unspent uranium-235 can be extracted from the spent fuel by chemical reprocessing and reused. But even after the extraction of these elements, the waste contains highly radioactive fission products and has to be stored in special sealed containers, away from human contact. Considerable research has been under way on safer methods of nuclear waste storage and disposal. One method involves conversion of the waste into a glassy substance which can be safely stored.

B.B.

INFORMATION TECHNOLOGY

It is generally accepted that information plays a vital role in decision-making in the management of government, industry, research or, for that matter, any organisation. Considerable time and effort has to be invested in the traditional methods of processing, storing, retrieving and disseminating information. Recent studies show that professional workers spend nearly a third of each workday looking for the information they need and possibly another 25% of the day in non-professional tasks such as making copies or delivering messages. This clearly indicates the need for advanced information technology which can reduce this time and simultaneously provide more suitable information for decision-making.

One of the results of information technology is the faster flow of information. Some of the service-oriented companies are likely to benefit more from this in terms of better planning, less time spent in handling crises, faster responses to customer-queries, greater co-operation between different departments and so on. The avoidance, by means of electronic methods, of paper-handling activities will yield various other benefits. With reduction in time spent on handling information,

there will be additional 'opportunity hours'; i.e., time available to do other activities and hence there will be improvements in productivity of the organisation. It is estimated that the productivity of secretaries and professionals can be doubled or tripled through the use of electronic equipment. It is also estimated that a 15-25% improvement can be expected in management productivity.

All this sounds pretty good. But how relevant is the modern information technology for India at this point in time? One of the primary arguments against information technology is that it will lead to unemployment with machines replacing men. There is some element of truth in this but the argument is not strong enough to warrant clinging to the traditional paper-work. What is required instead is the development of applications of this technology in a way in which it does not adversely affect employment opportunities. In fact this trend has already been initiated and systems are emerging which are 'people-enhancers' in nature instead of being 'people-replacers'. Therefore, instead of outright rejection of this technology or blind application, what is required is judicious application. In this respect, as far as India is concerned, information technology is no different from the other technologies.

The second argument against introduction of modern information technology is that it results in deskilling of labour. In the West this has been one of the factors that has impeded the implementation of this technology. The users feel that the machine starts doing their work and hence they feel bored. Prof Shoshana Zuboff of Harvard Business School has explained that this feeling comes because information technology fundamentally alters the individual's relations to the task. She calls this new relationship "computer mediated". Those who work with paper and pencil usually feel "in touch" with the objects of their tasks through the activity of writing and because they are the sources of what they write. With computer mediated work, employees get feedback about the task object only as symbols through the medium of the information system. Very often, from the point of view of the worker, the object of the task seems to have disappeared "behind the screen" and into the information system. This again is a reasonable and fairly true argument. But, ways are being found to overcome this as well.

It is being emphasised that the purpose of information technology is not to develop "decision-taking" systems but instead to develop "decision-support" systems. The system should in fact take care of the routine and mechanical tasks and leave the brainwork and exercise of judg-

ment to the user. This means that the system should provide the required information quickly and thus help the decision-maker in making quicker and better (well-informed) decisions and thus make him more effective. In India where this technology is very new, the kind of applications it is likely to find in the near future are not in any way going to impinge on the rights of the user or the employee. The technology is not even being used for the routine tasks so the question of it doing decision-making work does not arise at all. The argument therefore makes more sense in the West and we can hope that by the time we reach that stage they will have found suitable answers for us.

Some critics have also pointed out that the technology does not necessarily lead to increase in productivity. This is true. We should be cautioned against assuming that once we have introduced this technology it will automatically lead to increased productivity. Its introduction has the **potential** to increase productivity and creativity. Word 'potential' is crucial and implies that the user has the responsibility of converting this potential into actual benefit. This means that installation of such systems is only the first step and should not make us complacent.

Information technology is growing rapidly in India, and is expected to expand even faster in the near future. The present target for production of electronic goods

EQUIPPED TO INFORM

Secretarial workers: Some of the technologies that can be used to support and enhance the secretarial worker include: word processing, facsimile transceivers, optical scanning, intelligent copier-printers, automated dictations systems, microform retrieval systems and electronic photo-typesetting.

Professionals: Technologies like electronic mail message systems, personal computing, distributed data processing and automated storage and retrieval systems can provide the necessary support to professionals.

Managers: In addition to the technologies that are useful for professionals, technologies such as decision-support, teleconferencing and business graphics can enhance the manager's capabilities and provide the potential for greatly improved productivity.

Some of the indigenously produced low-cost office products that are now available are pocket computers, electronic calculators, dictation machines, auto-diallers, electronic intercoms, personal copiers, electronic typewriters and spirit based addressing machines.

by 1990 is Rs 10,000 crores. It is reasonable to project that the Indian information technology business sector on its own will contribute increasingly to the wealth of the economy since it is part and parcel of the concept of modernisation being promoted by the leadership of the nation.

ARJUN SRIVASTAVA

TECHNOLOGY POLICY

Though India has had a long and distinguished tradition in science and technology from the ancient times to the earlier half of the present century, organised efforts to develop science and technology on a nationwide scale began only after independence. One of the first steps in this direction was the adoption by Parliament of the Scientific Policy Resolution in March 1958. It spelt out, for the first time, the government's resolve "to foster, promote and sustain the cultivation of science and scientific research and to encourage and initiate programmes for the training of scientific and technical personnel, on a scale adequate to fulfil the country's needs in science and education, agriculture and industry, and defence." The resolution stressed the need "to ensure that the creative talent of men and women is encouraged and finds full scope in scientific activity and to encourage individual initiative for the acquisition and dissemination of knowledge and for the discovery of knowledge, in an atmosphere of academic freedom." The adoption of the resolution had a far-reaching impact on the growth of science and technology in post-independent India.

One of the first steps the government took to attain the objectives spelt out in the Scientific Policy Resolution was to offer better conditions of service to scientists and associate them with the formulation of major policies. Simultaneously, research facilities were vastly expanded with the setting up of a chain of national laboratories, expansion of science departments in universities and opening of institutes of technology. An important landmark came in the early 1970s when the Fifth Five Year Plan was being formulated. For the first time the country's socio-economic development plan was integrated with a definite science and technology plan. The Science and Technology Plan (1974-79), as the Fifth Plan came to be called, was prepared by the erstwhile National Committee on Science and Technology (since superseded by the Science Advisory Committee to the Cabinet).

It was soon realised, however, that des-

(Continued on page 53)

BRIEF NOTES

The Civil Services (Mains) are round the corner.... To help you face them with confidence, here are a few information-packed analytical notes.

DE-INDUSTRIALISATION OF BRITISH INDIA

Handloom weaving was the most prominent and profitable handicraft industry in India during the pre-British period. Until the middle of the 18th century, Indian silk and cotton textiles held their own in foreign markets in spite of the imposition of heavy restrictions and prohibition on their sale in England and other European countries. In the middle of the 18th century two very important events took place : (1) the English textile industry began to develop on the basis of new and advanced technology; (2) in 1757, after the Battle of Plassey, the East India Company acquired political control over Bengal.

The process of de-industrialisation was begun by the company's use of its newly acquired political power to push its Indian trade and make it as large and as profitable as possible. The Company used its political power to dictate terms to the weavers. The result was that because weaving became un-remunerative and the weaver's profession invited for him troubles, risks and oppression, there was large-scale desertion of their professions by the weavers. The silk industry, too suffered a similar fate. The silk winders were given advances and made to work for the company; they could not work for local or private demands, nor could they get adequate returns for their work. They, too, therefore, began to desert their professions. The gradual disappearance of Indian rulers and their courts who were the main customers of town handicrafts, also gave a big blow to these industries. For instance, the production of military weapons depended entirely on the Indian states.

In 1813, the East India Company's monopoly of the Indian trade was abolished. After 1813 India had to admit British goods free or at nominal tariff rates; a policy of fresh conquests and direct occupation of protected states like Avadh was followed in order to increase the number of purchasers of British goods; modernisation especially through English education was begun to develop a taste for Western goods in more and more Indians; means of transport and communication were developed. The ruin of

Indian industries, particularly the rural artisan industries, was even more rapid once the railways were built. The railways enabled British manufacturers to reach the remotest villages of the country.

The result was that Indian handmade goods were unable to compete with the much cheaper products of British mills. The continued levy of prohibitive import duties in Britain hastened the destruction of Indian handicraft industries. India now became an economic colony of industrial England; it exported raw materials like raw cotton and raw silk which British industries needed urgently, or plantation products like indigo and tea, or foodgrains which were in short supply in Britain.

VJAY KONWAR

SWADESHI MOVEMENT

The *swadeshi* and boycott movements have their roots in the Anti-Partition agitation that started in Bengal when on Jul 20, 1905, Lord Curzon issued an order dividing the province of Bengal into two parts—eastern Bengal and Assam with a population of 31 m and the rest of Bengal with 54 m.

The Anti-Partition agitation was the work of the entire national leadership of Bengal and not of any one section. Both the moderate leaders like Surendranath Banerjee and Krishna Kumar Mitra and the militant and revolutionary nationalists cooperated with one another during the course of the agitation. Massive demonstrations were staged and resolutions were passed in which the people pledged to do their utmost to maintain the unity of Bengal.

However, soon the leaders realised that all this was not going to prove effective and more positive action should be taken to reveal the intensity of popular feelings. The answer was *swadeshi* and boycott. Mass meetings were held all over Bengal where *swadeshi* or use of Indian goods and boycott of British goods was proclaimed. Public burning of foreign cloth was organised and shops selling foreign cloth were picketed. The movement was an immense success.

It had its impact not just in providing a

constructive channel for pent up nationalist feelings but also gave a great deal of encouragement to Indian industries. Many textile mills, soap and match factories, handloom weaving concerns, national banks and insurance companies were opened. It had several consequences in the realm of Indian culture, too. There was a flowering of nationalist poetry, prose and journalism. The patriotic songs written at that time by poets like Rabindranath Tagore (Bande Matram), Rajani Kant Sen and Mukunda Das are sung in Bengal even to this day. Another constructive activity undertaken was that of national education. National educational institutions for providing literary, technical and physical education were opened by nationalists who felt that the existing system of education was inadequate. On Aug 15, 1906, a National Council of Education and a National College with Aurobindo Ghose as principal were set up.

Another important aspect of the movement was the widespread support it received from women and the Muslims. The students played a leading role throughout. However, the movement did not involve the peasants of Bengal. It was confined on the whole to the towns and the upper and lower middle classes of the province.

V.K.

REVOLUTIONARY TERRORISM

It was the thinking of Tilak and Aurobindo as well as the partition of Bengal that let loose the stream of terrorist consciousness. Although Tilak spouted fire he was still for responsive cooperation. On the other hand, Aurobindo was for aggressive resistance of the Russian type. The bomb attacks in Muzaffarpur and a hide-out of terrorists in Maniktalam were the results of his belief.

In the years after 1905, the British became very cautious; public meetings were controlled and at times forbidden; the press was gagged and students were punished for defying orders. In 1907-1908, quite a few Bengali leaders and others including Aurobindo, Krishna Kumar Mitra, Ashwini Kumar Dutt, Lala Lajpat Rai, Ajit Singh and Tilak were either deported or imprisoned.

One of the strategies that was adopted by the revolutionary terrorists was assassinating unpopular officials. Secret societies for revolution were formed and several revolutionary newspapers like the *Sandhya* and the *Vagantari* in Bengal and the *Ka* in Maharashtra were being circulated.

However, stern penalties and harsh

laws broke the back of the revolutionary terrorists and the movement started petering out. This proved that individual cases of heroism could not mobilise the masses. The terrorists worked for class purposes without any common plan or Central leadership. They generally belonged to the middle class and did not have a base among the workers and the peasants. The moderates openly disowned them and the extremists were reluctant to accept them.

Terrorism appeared again towards the end of World War I. Indians abroad started mobilising support for planning a violent rebellion and formed the **Ghadar** (Rebellion) Party in 1913. They collected lot of funds and sent volunteers to foment rebellion among the Indian regiments in India and South-East Asia. The Britishers came to know of their plans and disbanded the rebellious regiments and imprisoned or hung their leaders.

Soon after Gandhiji suspended the Civil Disobedience Movement in 1922 and after the Simon Commission, the terrorists made their third appearance. Quite a few unpopular officers were killed (including some Indians) and the Governor of Bengal was shot at by a girl student. Bhagat Singh, Sukhdev and Rajguru were the more prominent leaders, who were deported in 1931. Another stalwart, Surya Sen, who escaped from Chittagong in 1932, was captured and hanged in Dacca in 1933. V.K.

DRAIN OF WEALTH

The drain of wealth from India began in Bengal in the year 1757 with the British victory at Plassey. Prior to 1757, for more than a century, European traders had been obliged to bring bullion into India, as Indian cotton and silk goods had a flourishing market in the West while Indian demand for Western products was usually negligible. The trend was reversed in 1757. Bullion began to flow out in a continuous stream, and after 1765, another form of drain was organised through the use of Bengal's revenues to purchase goods for export from Bengal.

In the first stage, plunder from Bengal and the profits made from duty-free inland trade were sent out. It has been estimated that between 1757 and 1765, nearly 6m pounds were sent to Britain. This amount did not include the trading profits of the company.

From 1765 when the company received the Diwan, the surplus revenue of Bengal was invested in purchasing the articles exported from India by the East India Company. These purchases were known as 'investments'. Thus, through investments, Bengal's revenue was sent to England. The actual drain was even more, as a large part of the salaries and other incomes of English officials and the trading

fortunes of English merchants also found their way into England.

There was a constant need for a unilateral transfer of funds to Britain and this need progressively increased over time. Before 1858, the East India Company had to bear the burden of maintaining its London establishment and paying dividends to its shareholders. This was replaced after 1858 by the costs of the Secretary of State's India Office; and the 'India Debt' in England, which was already considerable due to the company's military adventures and the expenses of suppressing the Mutiny, was sharply enhanced in 1858 when compensation to company shareholders was added to its account. These charges were called Home Charges which also included pensions to British Indian officials, and army officers, military and other stores purchased in England, costs of army training, transport and campaigns outside India but charged on Indian finances and the guaranteed interest on railways. In 1901-02, for instance, Home Charges came to £17.3m. To this official account must be added the remittances made by British officials in India and the transfer of profits made in India by British private investments.

The mechanism of the drain of wealth was as follows: British purchasers of Indian exports bought Council Bills from the Secretary of State in return for sterling (which was used to meet the Home Charges). The Council Bills were then exchanged for rupees from the Government of India's revenues, and the rupees used to buy Indian goods for export. Conversely, the British officials and businessmen in India bought sterling bills in return for their profits in rupees from British owned Exchange Banks; the London branches of these banks paid in pound for such bills with the money coming from Indian exports, purchased through the rupees obtained through the sale of Sterling Bills. V.K.

GANGA PROJECT

There is perhaps no other river in the world which holds such a central place in the lives of a people, as the river Ganga does for Hindus. From time immemorial the Ganga has symbolised the unity and continuity of a people otherwise divided by caste and regional barriers. On the banks of this holy river several activities—economic, cultural and religious—have flourished and therefore in more ways than one the Ganga represents the fountainhead of Indian civilisation.

Yet, despite all its sanctity, the Ganga is extremely polluted and though it may still purify the soul, it does not do the same to the body.

The major sources of pollution identified so far include industrial wastes,

dumping of sewage, immersion of dead bodies and the surface run-off from cultivated areas on which fertilisers and pesticides have been used. Further, the holy dip taken by millions at pilgrim centres is another contributory factor towards pollution. UP, particularly Kanpur, contributes most heavily to the pollution of the river with West Bengal following suit.

It is with this existing state of affairs that PM Rajiv Gandhi announced the formation of the Central Ganga Authority (CGA) in February with the prime objective of cleaning the Ganga and preventing further pollution of the river. A 10-member board has been set up for this purpose with the PM as its chairman and the other members consisting of the chief ministers of UP, West Bengal and Bihar, the Deputy Chairman of the Planning Commission and the ministers of state for science, technology and environment. Though the idea of cleaning the Ganga was the brainchild of the former PM, Mrs Indira Gandhi, it could not be realised by her due to her sudden death.

The Ganga, which is 2,525 kms long, begins from Gangotri in the Himalayas and flows through eight states—Himachal Pradesh, Punjab, Haryana, UP, Rajasthan, Madhya Pradesh, Bihar, West Bengal, including the Union territory of Delhi, before it merges with the Bay of Bengal at Ganga Sagar. During its course, it passes through 29 class I cities (population over 1,00,000) 22 class II cities (population between 50,000 and 1,00,000) and 48 towns having a population less than 50,000.

The cost of the five-year Ganga project which was estimated to be around Rs 250 crores, has been allocated a budget of Rs 292 crores, out of which Rs. 240 crores would be spent during the period of the Seventh Plan.

A Ganga Action Plan to co-ordinate the various activities was drawn up by the department of environment and approved by the Central Ganga Authority. It includes:

- construction of a network of sewer lines in all the towns, apart from the renovation of the existing sewage systems. Class I cities will be given first priority in all these activities as their population constitutes the majority of the people living on the river bank.
- low-cost sanitation schemes in areas near the river will be constructed to prevent human wastes from being deposited in the river.
- community cattle sheds will be set up in urban areas to prevent animal wastes from reaching the river.
- prevention of throwing of dead bodies into the river, though this being an age-old custom will be a sensitive issue to handle.

(Continued on page 66)

PUNJAB

AKALIS IN ACTION

The pre-poll days in Punjab passed in fearful expectancy of a terrorist attack. For disruptive forces have struck lethal blows whenever a solution to the Punjab problem has been within the Centre's grasp. The government, however, took all possible precautions to avert any such possibility this time. Apart from the massive deployment of security forces in the state, there was also considerable tightening of security measures for the poll contestants. The government also announced its decision to treat its employees on election duty on par with para military staff in relation to performance of poll duty. A compensation of Rs 1 lakh to Rs 1.25 lakh was also announced for the family of any employee who might suffer a mishap whilst on poll duty as well as employment to at least one member of the bereaved family.

However, despite these measures the terrorists did make vain bids to spread panic. On Sep 22, three people in Delhi were killed in a transistor-bomb blast similar to the ones that rocked the Capital and parts of north India in May last. And on Sep 23 a series of bomb blasts erupted across Punjab killing three people and causing extensive damage to several vehicles used for canvassing.

Electioneering was also comparatively subdued in the state this time. And although PM Rajiv Gandhi's election tours did draw the crowds, there was a marked absence of big public rallies on the whole. Candidates relied mainly on personal contacts and door-to-door campaigning. While the election manifestos of the two major contenders—the Akali Dal and the Congress (I) laid emphasis primarily on peace, prosperity and economic development, the Akali Dal made concerted efforts to portray a united, secular front. It even went to the extent of fielding six Hindu candidates.

On Sep 25 Punjab went to the polls—overtly calm but tense. But much to everyone's relief polling was mostly peaceful, unmarred by terrorist violence and unaffected by the boycott call given by Baba Joginder Singh of the United Akali Dal. The overall polling percentage averaged 55% to 60%—respectable by any poll standards.

The results did not come as a surprise. The Akali Dal emerged victorious with 73 of the 115 Assembly seats to its credit—just falling short of a two-third majority. What did come as a surprise, however was the scale of the Akali victory. It bettered its previous best of 1977. Obviously the magnitude of the victory could not have been possible with only Sikh votes going in the Dal's favour, which goes to show that a substantial number of Hindu votes were also cast for the Dal, underscoring the people's desire for a strong, stable one-party government to a weak coalition. The Dal also managed to secure seven of the 13 Lok Sabha seats leaving the remaining six to the Congress (I). The ruling party could amass a meagre 32 Assembly seats.

However, the clean sweep by the Akalis was viewed with a certain amount of trepidation. For the Akalis have made no secret of their internal power wars. Former CM Prakash Singh Badal was expected to create bad blood during the selection of the party leader. But realising the enormous responsibility entrusted to the Dal by the people of Punjab, Badal himself proposed the name of Surjit Singh Barnala, the obvious inheritor of Longowal's moral legacy, for the party's leadership. The obvious corollary was the unanimous selection of Barnala as the new CM of Punjab.

On Sep 29, a six-member Punjab Ministry was sworn into office. Badal, for reasons best known to him, has decided to opt out of the ministry. At the moment the ministry comprises CM Barnala who is also in charge of the home, justice, vigilance, personnel and administrative reforms, cooperation, information and public relations portfolios; Finance Minister Balwant Singh who will also have the additional portfolios of excise, taxation and industries; Amrinder Singh has been allocated the portfolios of agriculture and forests, rural development and panchayats while Sukhjinder Singh gets education and cultural affairs. Basant Singh Khalsa has been given health, family welfare, social and women's welfare and welfare of scheduled castes and backward classes and finally, Major Singh Ubode has been entrusted with defence services, welfare, revenue and rehabilitation.

Barnala has promised the people a government which "everyone may regard as his own". But his initial moves as CM show distinct signs of succumbing to communal pressures. Already the detention orders of 224 people arrested under the National Security Act have been revoked. Barnala has also made it abundantly clear that his government will not go out of its way to wipe out extremism. According to him, extremists will be dealt with "politely and softly". Said Barnala, "After all they are our own people who have gone astray, and they have to be brought back." To add to this he has given his assurance that police will not be allowed to enter the Golden Temple in the future.

Such moves may well widen the communal rift between the Sikhs and non-Sikhs in the state. At this juncture, therefore, Barnala's foremost objective should be to establish his credibility.

INDIA-SRI LANKA

FIRE AND FURY

Even though the Tamil militants and the Sri Lankan army have given up any pretence of a ceasefire and are once again at war with each other in right earnest India continues to flex its diplomatic muscles in an attempt to get the warring factions back to the negotiating table. Despite the setback it suffered during the Thimpu talks, India has made renewed efforts to placate the two sides.

The External Affairs Ministry in New Delhi had wide-ranging talks with a high-level Sri Lankan team on the working paper relating to devolution of powers in Tamil areas. The Eelam National Liberation Front (ENLF) and other Tamil groups were also invited to New Delhi for consultations. PM Rajiv Gandhi himself met the Tamil militant leaders.

The efforts did not prove entirely futile. India managed to ensure an interim ceasefire from the Tamils and Sri Lankans. What it could not manage, however, was an extension of this fragile understanding between the two sides to an effective and final ceasefire. The blatant violation of the ceasefire agreement by the trigger-happy Sri Lankan forces and the Tamil militants has created a lot of bad blood.

So, although the Tamil leaders have come out with suggestions for a lasting ceasefire no common ground for an agreement has yet been found. In fact one of the major suggestions for an external peace-keeping force for supervising the implementation of the ceasefire has been rejected outright by the Sri Lankan authorities. They are, however, planning to constitute a team of observers, solely composed of Sri Lankans belonging to the major ethnic strata and having judicial experience to monitor the ceasefire.

Meanwhile, the Tamils have also laid down certain pre-conditions for a formal ceasefire. These include disarming of home guards and civilians, non-imposition of curfew in Tamil areas, lifting of surveillance zones confining of security forces to the barracks and a settlement policy which does not alter the demographic pattern in any way.

The ENLF has also demanded expulsion of British SAS-trained mercenaries and Mossad (men of Israeli Intelligence) from Sri Lanka. It has asked the Sri Lankan Government to stop sending civilians to Pakistan for arms training. The ENLF has also sought protection for various sections of Tamils in the island nation including fishermen, shopkeepers and plantation workers as also guarantees against burning, looting, abduction and rape in Tamil areas.

The Sri Lankan Government at the moment has adopted an aggressive stance too and is not willing to concede an inch. So in spite of the declaration of a temporary ceasefire—an extension of the 12 week truce—both sides are still indulging in violence.

Across the Palk Straits, the Tamil Nadu state government along with various political parties organised a state bandh on Sep 24 to protest against the atrocities on Sri Lankan Tamils. This is the second organised bandh (the first was organised on Aug 2, 1983). Mass fasts and bandhs were organised by the ruling AIADMK. The Union territory of Pondicherry also observed a 12 hour bandh.

On the same day, unfortunately, the Tamils in Sri Lanka, in a major ceasefire violation, launched a massive attack on a police station in north Sri Lanka. But, as Sri Lankan Security Minister Lelith Athulathmudali put it rather optimistically—"Success comes only after a number of failures. The important thing is not to give up."

CHANGE FOR THE BETTER?

A Cabinet reshuffle had been on the cards for quite some time. Yet when it finally took place on Sep 26, everyone was taken by surprise particularly the ministers involved. The large-scale inductions, expunctions, promotions and demotions are, however, by no means haphazard. They have been carefully planned and executed with clinical precision.

Not only has the reshuffle brought in several new faces and transferred old faces to new places, it has changed the basic structure of the PM's Cabinet considerably. While reducing the importance of Cabinet ministers substantially, it simultaneously bestows additional powers on the ministers of state who will henceforth have specific responsibilities. The hitherto two-tier council of ministers has now acquired

a third tier with the induction of three deputy ministers. And, in keeping with his youthful image, the PM has transfused young blood into the Cabinet. Young, dynamic persons have been placed in key positions from where they can run the affairs of the state without undue interference by senior members. Finally, not only has there been a reshuffle of ministers but a restructuring of ministries too. Where earlier there were 31 ministries there are now only 27, of which three are looking after new portfolios—Programme Implementation, Transport and Water Resources. And, with due consideration to the importance of ministries, departments have been increased, reduced or merged accordingly. Then, the institution of parliamentary secretaries in the PM's Cabinet has been completely abolished.

Altogether 16 new ministers have been inducted which include three new Cabinet ministers, while six ministers have been ousted. These include C.S. Singh (textiles), Margatham Chandrasekhar (women and social welfare), Bir Sen (environment and forest), Ashok Gehlot (tourism

ANALYSING THE CHANGES

BY C.P. BHAMBRI Dean, School of Social Sciences, JNU

The Council of Ministers of the Union Government was reshuffled on Sep 25, 1985, following which 15 new persons were included and six ministers of PM Rajiv Gandhi's team dropped. The Constitution of India provides for a parliamentary form of government in which the PM is the head of a Council of Ministers. It is on his recommendation that the President of India appoints ministers and allocates their specific responsibilities. According to parliamentary theory, the PM, as the leader of the majority party, has full powers to constitute his Council of Ministers, but in actual practice, every PM has to accommodate important political groups and regional leaders in his Council. Many a time a Cabinet reshuffle means simple reorganisation of work among the ministers. At times, however, a Cabinet reshuffle may take the form of a surgical operation. During the primiership of Pt Jawaharlal Nehru, important ministers from his Cabinet were dropped under the well known "Kamraj Plan". It was an important political operation carried out by Pt Nehru on the basis of political considerations. Similarly, the late Mrs Gandhi reshuffled her Cabinet in 1969 when she was involved in a political struggle with the Congress Party. The party split in 1969 because the reshuffle was based on a power struggle within the party. Thus a Cabinet reshuffle may result in trivial reorganisation of work or it may even have political significance. The PM may ask a minister to resign if he is not satisfied with his performance; or he may shift a minister and allot to him ministerial work of a politically sensitive nature, on the basis of which meanings are drawn as to whether a person has been promoted or demoted in the process of the reshuffle. While the selection of his team and allocation of work is a prerogative of the PM, many political considerations play a role in the constitution or reconstitution of the Council of Ministers. In the specific Indian context, the Council of Ministers should have caste, community and regional representation, and any imbalance is to be corrected by inducing new ministers to replace some of the old ones.

The recent Cabinet reshuffle has to be interpreted in terms of its political and administrative significance. Its political significance does not lie in the dropping of the six ministers from the Council for all of them were political light weights. The political significance of this reshuffle lies in (a) the induction of A.B.A. Ghani Khan Choudhury who was brought back from political wilderness; (b) appointments of Arun Nehru and Arun Singh in extremely crucial ministries and (c) the shifting of P.V. Narasimha Rao from the Ministry of Defence to the newly created Ministry of Human Resources Development.

Ghani Khan Choudhury is an important factional leader in the West Bengal Congress. Perhaps the PM felt that in the West Bengal Congress party, Chowdhury's faction deserved a special place. Arun Nehru and Arun Singh are very close to the PM and by shifting Nehru from the Ministry of Power to the Home Ministry and by appointing Arun Singh, formerly Parliamentary Secretary to the PM, as Minister of State for Defence, Research and Development Organisation, the PM has reposed faith for these crucial ministries on his very close associates.

During the last few years, the internal law and order situation in India has deteriorated and the country has witnessed large-scale violence in Assam, Punjab, Gujarat and Maharashtra and caste and communal violence has been spreading in various parts of the country. The new Minister of State for Home, Arun Nehru has been appointed to perform

a very crucial role in the context of growing lawlessness in the country. Further, the problem of law and order is politically a very sensitive issue and any political misjudgment can lead to disaster.

India's internal security is deteriorating and the US-Pak military aid programme is creating serious problems for our defence preparedness. This is one reason why the PM has brought in Arun Singh, a personal friend, as Minister of State for Defence, Research and Development Organisation. For the last two decades, India has concentrated on indigenous defence production because during the Indo-Pak war, 1965, the US refused to give India the spare parts for its defence equipment. This had an impact on the Indian policy-makers and a serious effort was made to undertake defence research and development programmes.

B.R. Bhagat has been brought into the Cabinet as Minister for External and he will be assisted by K.R. Narayanan, an erstwhile diplomat, who will be the Minister of State in this ministry. In the previous years, many a time the PM has himself handled India's foreign affairs and at times separate Cabinet ministers like Y.B. Chavan, Swaran Singh and Dinesh Singh have handled this vital portfolio.

India is the chairperson of the non-aligned movement and we believe in an activist foreign policy of non-alignment and world peace. This requires political leadership and only an independent Cabinet minister can provide such a leadership to the Ministry of External Affairs.

The reshuffle can also be viewed from the administrative angle. If a government wants to focus its special attention on some specific programmes of development, it either creates a new ministry or reorganises and restructures the old ones. In this reshuffle, ministerial departments of urban development and rural development have been established. In the changing context of India's socio-economic development, urban and rural development require special attention. The creation of a separate department for urban development and rural development shows that the new government knows that the totality of problems of urban and rural development can be tackled in a comprehensive manner only if separate ministers deal with them independently. Similarly, the creation of a new Ministry of Human Resources Development with Education, Culture, Youth Affairs, Sports and Women is a recognition of the fact that development of the vast human resources of India needs special attention.

The new government is also concerned about the administrative bottlenecks in the country's economic development—especially the inefficient functioning of the infrastructure and the public sector enterprises. Ghani Khan Choudhury has been appointed as Minister for Programme Implementation and all aspects of transport have been brought under a new Ministry of Transport. A Cabinet minister has also been appointed to deal with Water Resources. Thus creation of new ministries of Transport, Water Resources and Programme Implementation shows that the Government of India attaches great significance to the speedy economic development of the country. Hence the reshuffle of the Council of Ministers is apparently efficiency-oriented and result-oriented.

In a nutshell the Cabinet reshuffle has two basic goals—(a) to provide political weight to the Ministry of Home, Defence and External Affairs, and (b) add administrative strength to the Ministry of Economic Affairs. However, the future will reveal the results of this political exercise.

The New Cabinet

Following is the list of ministers in the new Cabinet with their respective portfolios.

PM Rajiv Gandhi
Defence Science and Technology, Planning, Personnel and Administrative Reforms, Environment and Forests

Cabinet Ministers

Buta Singh
Agricultural and Rural Development
Vasant Sathe
*B.R. Bhagat
V.P. Singh
Mohsina Kidwai
S.B. Chavan
P.V. Narasimha Rao
*N.D. Tiwari
Asoke Sen
H.K.L. Bhagat
A.B.A. Ghani
Khan Choudhary
K.C. Pant
Bansi Lal

Abdul Ghafoor

B. Shankaranand

V.N. Gadgil

Khursheed Alam Khan
R.N. Mirdha
K.P. Singh Deo

T. Anjiah
Nawal Kishore Sharma
*Rajendra Kumari Bajpai

Yogendra Makwana
Natwar Singh
C.L. Chandrakar
Arif Mohammad Khan
K.R. Narayanan
Janardhan Poojary

Arun Nehru

P.A. Sangma

*Sushila Rohatgi

R.K. Jaichandra Singh

Urban Development
Water Resources

Ministers of State (Independent charge)

Information and Broadcasting
Commerce
Communications
Food and Civil Supplies
Labour
Petroleum
Welfare

Ministers of State

Agriculture
Fertilisers
Rural Development
Power
External Affairs
Banking and Insurance
Internal Security
Police, Rehabilitation, Law and Order
States and Union territories
Education and Culture
Chemicals

*M. Arunachalam
H.R. Bhardwaj
Ghulam Nabi Azad

*Sitaram Kesri

Ram Dulari Sinha
Madhav Rao Scindia
*Rajesh Pilot
*Jagdish Tytler
Dalbir Singh

*Sukh Ram

Arun Singh

Shivra; Patil

*Ajit Panja
Z.R. Ansari

*S Krishna Kumar

*P. Chidambaram

*G. Gomango

(*New inductions)

Industries
Law and Justice
Parliamentary Affairs (Rajya Sabha)
Parliamentary Affairs (Rajya Sabha)
Mines
Railways
Surface Transport
Civil Aviation
Urban Development
Defence Production and Defence Supplies
Defence Research and Development Organisation
Personnel and Administrative Reforms
Planning
Environment and Forests

Deputy Ministers

Family Welfare
Commerce
Welfare

and civil aviation)—all of whom are ministers of state—and two Cabinet ministers—Veerendra Patil (industry) and Rao Birendra Singh (food and civil supplies). The shake-up of the Cabinet is a clear indicator of the PM's intention: he wants a well-knit and well co-ordinated team of result-oriented, dynamic men at the helm to steer the country on the path of progress.

The Cabinet reshuffle has also been responsible for the acquisition of a new CM by UP. The former CM N.D. Tiwari had, a year earlier, given

up his Cabinet position as Minister of Industry, to take up the reins of administration of the most populous state in the country. And, only two days prior to the reshuffle, he tendered his resignation from the post of CM. Obviously the Cabinet needs his undoubted political acumen far more than does UP. And PM Rajiv Gandhi's visit to the flood affected areas in UP a week earlier was intended to serve more than one purpose. Not that UP was allowed to suffer because of Tiwari's exit. In a smooth transition Vir Bahadur Singh, a known hardliner in the Tiwari Ministry, was unanimously sworn in as the new CM of UP. Singh has the reputation of being a no-nonsense man-of-action and may well prove to be a change for the better.

Some Restructured Ministries

Ministry	Then	Now
Home	Law & Order, Centre-State Relations, UTs, Official Language	Law & Order, Centre-State Relations, UTs, Official Language, Newspapers and Printing Press, Internal Security, IPS
Industry	Heavy Industry, Company Affairs, Industrial Development, DGTD	Company Affairs, Industrial Development, DGTD, Chemicals, Petro-chemicals, Bureau of Public Entrepreneurs
Information & Broadcasting	Radio, TV, DAVP Registrar of Newspapers, Film Censorship Newspapers & Printing Press	Radio TV, DAVP, Registrar of Newspapers
Commerce Education	Commerce Education	Commerce, Textiles, Supply Film Censorship, Education, Sports, Arts & Culture, Youth Affairs (called Human Resources and Development)
Railways	Railways	Railways, Civil Aviation, Surface Transport (called Transport Ministry now)
Agriculture	Agriculture, Cooperation, Agricultural Research	Agriculture, Cooperation, Agricultural Research, Fertilisers, Rural Development

ASSAM

AFTER THE ACCORD

In the wake of the memorandum of understanding signed between the Centre and the Assam agitators, the government has decided to drop disciplinary action against Central Government employees who had participated in the Assam agitation, barring those involved in serious incidents of violence. Guidelines on the approach to these employees have already been issued by the Ministry of Personnel and Administrative Reforms.

According to these, the period of absence of various categories of employees due to their participation in the agitation will be regularised. In case of employees who were merely passive participants, the period of absence will be adjusted against leave. However break in service of active participants will also be regularised. This will prove particularly beneficial for employees, especially in the railways, who had retired but were not being given retirement benefits owing to forfeiture of past services.

The Government has also decided to take back temporary employees who had been discharged for participation in the agitation, provided the posts vacated by them are still open and they have not been involved in any violent act. Those already penalised will also be given an opportunity to file appeals and review petitions.

The Election Commission, in the meantime, is facing an uphill task in Assam. When the Assam accord was signed, the EC had practically completed the intensive revision of electoral rolls on the basis of Mar 25, 1971 as the cut-off year. In fact, the final rolls for 62 of the 126 constituencies had even been published. With the announcement of Jan 1

1988 as the new cut-off year, the EC will have to partly repeat the tedious exercise of roll revision. And before the publication of the final electoral rolls in the state, the EC will have to dispose of over 12 lakh claims and objections. For this it has already appointed 10 central observers and 13 additional chief electoral officers.

The EC, however, hopes to finalise the electoral rolls by November. Which means elections will, in all probability be held in December. Meanwhile, widespread bandhs and protest demonstrations in the minority areas of the state clearly indicate that the accord has antagonised the minorities. In any case, the Congress (I) will not be hot favourites in the election fray. The tussle will be centred around the Assam agitation leaders, still riding high in the aftermath of the accord, and the CPM and other political parties which are opposing the accord.

INDIA-BHUTAN

REAFFIRMATION OF GOODWILL

PM Rajiv Gandhi's three-day visit to Bhutan, the land of the thunder dragon or Druk Yul, starting Sep 29, further strengthened the bond of friendship which exists between the two neighbouring countries. The visit was, however, not merely an official one. A deep personal note ran through it. For Bhutan's royal family enjoys close personal ties with the Nehru clan—since way back in 1958 when former PM Jawaharlal Nehru visited the country. The late PM Indira Gandhi too visited Bhutan twice—in 1968 and 1972.

Apart from this India has also played the role of Bhutan's vital economic prop for the past 27 years. Not only has it financed most of Bhutan's development programmes and Five Year Plans but it is also its largest development and trade partner. In fact, its assistance amounts to a sizeable 50% of the country's Fifth Plan anticipated expenditure during 1981-87. However, as Rajiv Gandhi was quick to point out, this assistance has no political strings attached. "Rather, we consider it a sharing of resources for common benefit," he said.

As of now, India plans to finance the improvement of electricity distribution systems in Thimpu and Paro and also the construction of mini hydel projects at Gyetsa and Khaling in eastern Bhutan. Currently India is engaged in helping Bhutan set up its broadcasting station.

During his stay at Thimpu Rajiv Gandhi addressed a special session of the Bhutan National Assembly. *Thetschogdu*. Summing up his visit on his return he said: "The visit went off well. We exchanged views and as a result of the visit, the Bhutan—India friendship is further strengthened." But perhaps the most accurate summation of Indo-Bhutanese relations was made by Bhutan's Foreign Minister Lyangpo Dawa Tshering who remarked: "On various international issues we do not see eye to eye with India but the differences should be accepted as between two neighbours enjoying mutual respect."

SEVENTH PLAN

PRIORITIES ON PAPER

The Planning Commission has approved the Seventh Plan draft. The finalised Plan document envisages a total public sector outlay of Rs 1,80,000 crores. This marks an increase of nearly 64% over the actual outlay of Rs 1,10,000 crores during the Sixth Plan. Although the approach paper of the Seventh Plan approved by the National Development Council envisaged a total Plan-outlay of Rs 3,20,000 crores inclusive of the Rs 1,80,000 crore public sector outlay, a serious resource crunch has forced the commission to reduce the share of public sector outlay from 80% in the Sixth Plan to 55% in the Seventh. The share of the private sector has registered a corresponding increase from 20% to 45%. There is an assumption that the pricing policy of the public sector will have to be revised in an attempt to raise the income of the public sector units.

The hallmark of the Plan, however, is the investment in modernisation and updating of technology in all sectors. Higher allocations have been made for infrastructural sectors like power, coal, petroleum and railways. Adequate provision has been made for agriculture, rural development, and irrigation too. Emphasis has also been laid on improving dry land farming and rice cultivation in the eastern region in an attempt to attain regional balance in the agricultural sector. The Plan document also lays greater stress on human resources development in areas of social welfare, education and youth services (including sports), health and family welfare. Special attention has been given to socio-economic programmes for women.

The Plan projects an annual growth rate of 5%. The annual growth rate for exports is an estimated 6.8% while that for imports 5.8%. Quite

hearteningly the Plan is expected to generate additional employment opportunities to the tune of 40m man years but at the end of the Plan period there would still be a backlog of nine million man years. The agricultural strategy has been changed accordingly to step up employment in the rural sector. The IRDP and anti-poverty programmes will also be strengthened while construction activities will be given a boost in the urban sector to generate more employment opportunities. According to the Plan document, the poverty line will decline from the present 37% of the population to 26% in 1989-90 in terms of the revised poverty line of Rs 6,400 per year for a family of five members.

Level of deficit financing will, according to the draft Seventh Plan, be maintained at Rs 13,000 crores for the five-year period. However, since the 1985-86 budget envisages a deficit of over Rs 5,000 crores, deficit financing will not be able to raise more than Rs 8,000 crores during the next four years. The level of external assistance is envisaged at Rs 20,000 crores. And although over the next two years no serious balance of payment problem is expected despite repayments to the IMF, there may be problems of balance of payment later on for which the document suggests limiting of oil imports and stepping up of exports substantially.

The finalised plan document will now be placed before the Union Cabinet for approval after which the National Development Council will place its final seal of approval.

RBI REPORT

NOTE OF CAUTION

The Reserve Bank of India (RBI) in its annual report for 1984-85, presents a happy picture of the Indian economy. On the eve of the Seventh Plan the economic scenario is very encouraging. The level of foodgrains stocks has touched an unprecedented 29m tonnes with the public distribution system. The level of foreign exchange reserves is also reasonably comfortable. Both these factors are vital for the restoration and sustenance of price stability.

The recent relaxations in industrial licencing and imports and fiscal reforms together with a sustained buoyancy in the capital market is designed to catalyse investments in the economy. Also, according to the report there was a noticeable improvement in the price situation dur-

(Continued on page 54)

Sunny Star



Blazing on the trail of Daimler Benz's two world record setting 'economobile' cars, which in 1980 stunned the world by giving over 1,200 km per litre, is another Benz trendsetter: Solar-powered 'Silver Arrow'.

The car was flashed out in all its sparkling finery during the Tour de Sol: the Swiss car rally for solar-powered vehicles. The Benz marvel on wheels was surely the star of the show. In cooperation with Alpha Real AG, the Zurich company responsible for the power unit, Benz technicians managed to put the car on its road to fame, in just five months.

At Tour de Sol the car displayed an amazing performance - its 432 solar cells pump out 480 watts of power propelling the car to a maximum speed of 71 km per hr. 'Silver Arrow' streaked away with all praises and won the competition - naturally one might say!

MEXICO

FATAL ROCKS

In one of the worst natural disasters in this century, Mexico was rocked by a series of earthquakes that left more than 10,000 dead, according to American sources. The first quake hit Central Mexico on Sep 19, devastating Mexico City. According to the Mexican Red Cross, at least 760 persons were killed, 868 were still missing on the second day and 4,642 were injured. But unconfirmed newspaper reports spoke of 3,000 dead in Mexico City and an additional 300 in the Pacific coastal states, 321 km southwest of the capital. The quake measured 7.8 on the Richter scale and left an 8,00,000 square km arc of destruction from coast to coast. The US Geological Survey in Golden, Colorado put the epicentre in the Pacific, 400 km southwest of Mexico City.

People were still stunned by the after effects of the first quake when the second quake, followed by a third quake wrought havoc through Mexico City over the next two days. The third tremor was one of a string of after shocks but even this measured 4.5 on the Richter scale. The second quake killed over 4,000 people as buildings left tottering by the first quake collapsed and gas mains caught fire. The buildings included schools, office blocks, residential buildings and worse still, hospitals, which were nursing survivors of the earlier quake. Aeroplanes were not allowed to fly over Mexico City because it was feared that vibrations may cause more buildings to collapse.

Meanwhile, the international community rushed to Mexico's help with medicines, food, rescue workers and other kinds of help. This quake was the strongest in the world since the one that had hit Chile last March when 177 people were killed. The worst earthquake in modern times, however, occurred in China in 1976. China said at the time that 2,42,000 people had died, but other estimates put the toll around 7,50,000.

BRITAIN RIOTS

IN BLACK AND WHITE

The worst urban riot in Britain since the Brixton and Toxteth riots of 1981, broke out in mid-September in the Handsworth section of Birmingham, the second largest city in Britain. Trouble began when a white traffic policeman stopped a black man suspected of driving a stolen car. A hostile mob of black youth gathered and soon a fight began between the blacks and the police which spread to looting and arson for two consecutive nights which left two men dead and 200 arrested. Most of the victims of the riot were Asians and some 50 of their shops were gutted. Although residents of the area blamed frustration stemming from unemployment and hopelessness as the major cause of the riot, the British authorities had little patience for sociological explanations and said that it was "a celebration of lawlessness, pure and simple".

However, Handsworth happens to be a traffic ghetto, where poor people of West Indian, Indian and Pakistani origin live. The small shops in the area are owned almost exclusively by the Pakistanis and the blacks are customers not employees of these family businesses. Their resentment is also directed towards the police: quite a few of the young blacks are Rastafarians, a cult which believes in returning to an ideal Africa but which also uses marijuana and its derivatives as mystical sacraments. Drug abuse and drug peddling are major problems in the area. Unemployment stems from the fact that Birmingham, which used to live by making cars, has fallen on hard times. Between 1978 and 1984 it lost one-third of its manufacturing jobs. Of the 16-year-olds who left the schools serving the area in 1984, 18% of the whites, 16% of the Asians and only 5% of the blacks had found jobs by November.

Though the opposition labour Party wanted a full-scale judicial inquiry into the riots, the government was content to leave investigations to the police. Meanwhile, Handsworth slowly limped back to normal. The local businessmen organised a traders' association and decided to ask for a larger police presence in the area and to seek \$26m in compensation from the government.

Later in the month, trouble broke out again, this time in Brixton, South London, which had been badly affected in the ethnic riots of 1981. The trouble began when the police shot and badly injured an innocent person, Sherry Gince, in her own house. They had entered the house on

the pretext of looking for her teenage son regarding an earlier criminal incident. As news of the affair spread, Afro-Caribbean youth rioted and at least 53 people were injured, among them 16 policemen and two firemen.

ISRAELI RAID

TARGET ARAFAT

In a dramatic 2,500 km air raid operation, eight Israeli F-16 war planes bombed the headquarters of the Palestinian Liberation Organisation (PLO) at Hammam beach near the capital, Tunis. The attack led to the killing of 156 people and severely damaged the PLO administrative and residential buildings. PLO Chairman Yasser Arafat, who was returning from Rabat after a meeting with King Hasan of Morocco, escaped miraculously. Arafat, while returning to Hammam beach had stopped at Marsa to confer with the deputy general commander of Palestine revolution forces there, and in the process evaded the bomb attack.

The Israeli Government claimed responsibility for the attack stating that it was in retaliation for the killing of three Israeli hostages in Larnaca, Cyprus on Sep 25. The Israelis allege that the murder of the three hostages was engineered by members of 'Force 17', an elite PLO group under the special control of Arafat. Although some PLO members claimed responsibility for the killings of the three Israelis believed to be spies, the PLO has denied any involvement in the incident. This is the second Israeli operation of this kind—the earlier instance being in 1978 when Israeli commandoes flew to Entebbe airport, Uganda to rescue hijack hostages.

The response of the international community, except the US, to the Israeli attack has been one of strong condemnation. Egypt, in an act of protest suspended its talks with Israel over a border dispute. Members of the non-aligned countries called for an emergency session of the UN Security Council to impose UN sanctions against Israel. Foreign ministers of the 10-member European Economic Community (EEC) also severely denounced the bombing. The US was the sole defender of the Israeli action, calling it a "legitimate response to terrorism".

The Israeli air raid has been widely interpreted as yet another attempt to destroy the consolidation achieved by the PLO under the leadership of Arafat. The PLO, after being forced out of Beirut in June 1982 by Israeli troops, had been ridden with intense factional troubles. Further, the long-term intent of such an attack may be to disrupt the Jordan-PLO peace initiative worked out earlier in February at Amman between the two parties, regarding the setting up of a Palestinian state.

LEBANON

BLACKMAILING USSR?

In a bid to force an end to the attack on the northern city of Tripoli by pro-Syrian militias, the Islamic Jihad militants, a Shia Muslim fundamentalist group abducted four Soviet nationals—three diplomats and an embassy physician and threatened to kill them if the fighting in the city of Tripoli was not halted. To show that they meant business, the Islamic Jihad militants, two days after the kidnapping, executed the Soviet cultural attaché Arkady Katkov and deposited his body near Beirut's shelled sports stadium. Shortly after the body was found, an anonymous caller claiming to belong to the Islamic Jihad group stated that a second hostage had also been killed. However, this report is yet to be confirmed. To present another twist to the already tense situation, another caller warned that the Soviet embassy would be blown up within 48 hours. The Soviets being in no mood to take any more chances, evacuated 120 occupants, mostly women and children, though the threatened attack never came about.

Though the fate of the remaining American and Soviet hostages still hangs in a balance, the ceasefire recently enforced in Tripoli is still holding. It is speculated that the recent incidents in Lebanon will signify definite shifts in Soviet policies in the Middle East. The Islamic Jihad organisation responsible for the above activities is an offshoot of the Iranian extremist group—Hezbollah. Syria, which is a close ally of the Soviet Union maintains diplomatic ties with Iran and one can only wonder what the next acts hold in the continuing tragedy of Lebanon.

Meanwhile, in retaliation against the Israeli raid on the Palestine Liberation Organisation headquarters in Tunisia, the same militant group, Islamic

Jihad murdered an American diplomat, William Buckley, missing from Beirut since March 1984. Although five other Americans and eight Europeans are also being held hostage by Islamic Jihad militants, this is the first time that an American hostage has been executed in Lebanon.

ISRAEL-IRAN

FLYING FOR TROUBLE

In mid-September, a DC-8 cargo plane apparently owned by an American cargo company called International Airlines which says it sold the aircraft to an unnamed Nigerian firm in August, strayed over Turkey en route to Spain from the Iranian town of Tabriz. It was later reported to have landed at Tel Aviv although the Israelis denied that it had done so. To deepen the mystery, Tel Aviv announced that it had landed, but for "repairs to its radar antennae" and had departed after three days.

Political analysts have been chewing over the mystery as to what the cargo aircraft was doing in Iran. The idea of an Israeli-Iranian connection is not new. During the days of the Shah, Tel Aviv found it profitable to hawk weapons in Teheran, but this apparently continued even after the Ayatollah took over power. In 1981, the Soviet news agency Tass reported that an Argentine aircraft had been sighted over Soviet Armenia while flying between Teheran and Cyprus. It was suggested that many planes flying Israeli arms into Iran had been regularly using a loop-hole in the Russians' radar system to do so. Although Israel has never acknowledged it, many sources feel that Israel has been supplying arms to Iran during the last five years of the Iran-Iraq war. Some senior Israeli officials have hinted that it is in Israel's interest to keep the warring parties busy. Fundamentalist Iran finds itself obliged to fight Arab rather than Jewish enemies, and thus keeps Iraq distracted from anti-Israeli ideas. The war has also split Iraq and Syria, lessening the danger of an 'eastern' front against Israel.

In 1984, President Reagan began to follow the policy of a rapprochement with Iraq and asked Israel to stop the flow of arms to Iran. While some senior Israelis agree that fundamentalism in Iran may become a problem for Israel in the long run, the right-wing Likud is in favour of keeping Israel's enemies fighting each other. If the DC-8 had actually been carrying arms to Iran with Israeli help, it would mean that the right-wing view still prevails in the ruling circles.

SOUTH AFRICA

BAN ON US AID

Two major developments occurred on the South African front in September. President Reagan, in a major foreign policy shift, announced that he was imposing a series of sanctions against South Africa through executive order. By these sanctions, among other things, Americans in both the US and abroad would be banned from granting new loans to South African government agencies except those in the area of housing, education and health care. Further, the export of most nuclear technologies and materials to South Africa and computer sales to South African agencies that administer apartheid policies would be prohibited. President Reagan issued this statement under mounting pressure from the US Congress, which has a pending sanctions bill, which the President wished to veto because his Administration has so far rejected legislated economic sanctions against South Africa. His veto would almost certainly have been overridden by the Congress. He, therefore, listened to his aides who advised him to accept most of the tenets of the pending legislation and then speak out against apartheid and thus regain the initiative.

The announcement of the American sanction was followed by similar announcements by Canada and the members of the ten-nation European Community, except Britain. Pressured by such measures from overseas and by the unrest at home which has led to the loss of over 700 lives in one year, President Botha told a provincial congress of his ruling National Party that henceforth blacks who live in the urban areas but are nominal citizens of the four "independent" homelands in South Africa, would be granted citizenship. One day later, a presidential commission recommended to Botha the scrapping of "influx control" regulations, or pass laws, by which the movement of blacks has been controlled since 1952. The commission recommended the abolition of the pass book system and the issuance of the same identity document to all South Africans regardless of race.

If the South African Parliament makes these recommendations into law, blacks would gain the right to live and work in any part of the country and to have their families with them instead of in distant homelands. As to Botha's announcement, if he follows through it would mean the

end of the Verwoerdian plan to create ten black home lands for the blacks, which would leave 87% of the country in the hands of the whites. Botha also said that the 5m people who live inside the independent homelands would be given dual citizenship, while the 4m people who live in the black townships of white South Africa would be permitted to regain their South African citizenships.

However, blacks will still lack political power despite the apparent cracks in apartheid. They will still not have the right to vote or have their own separate "parliament" like the two chambers created last year for the minority coloured (mixed) race and the Indian community.

KAMPUCHEA

POT IN A SOUP?

The Khmer Rouge faction of the Kampuchean coalition government in exile announced in mid-September that Pol Pot, the commander who was responsible for the death of over 1m people in Cambodia between 1975 and 1978 was resigning. The communique said that he would step down as Commander-in-Chief under a new rule that sets 60 as the retirement age for military and civilian officials. Pol Pot would be replaced by his second-in-command, Son Sen, who has a more acceptable international reputation.

While China, which backs the Khmer Rouge, hailed the shift as 'conducive to unity among the Cambodian people,' others were more sceptical. Many felt that Pol Pot was retiring only in name, but would continue to be their leader. Yet other analysts felt that it was a strategic move: by giving the appearance that Pol Pot had retired, the Khmer Rouge hoped to influence the Third World to increase its pressure on Vietnam to withdraw from Cambodia, which it has occupied since 1978.

There were surprise developments on yet another front. For the first time since the Paris Peace Accord was signed by Vietnam and the US in 1973, Hanoi has changed its policy towards Washington. The US had pledged in 1973 to contribute to the healing of the wounds caused by its war against Vietnam and the latter had promised to search for American servicemen missing in action (MIA). In 1977, Hanoi had dropped the linkage between normalisation, required before the US could pay reparation, and the MIA question. But after talks held recently between the two countries, Hanoi gave Washington an apparently unconditional pledge to complete the search for MIAs within two years through its own efforts. The US, which had so far regarded the MIA question as a purely humanitarian issue, has begun to relate it to clearing the way for the possible establishment of diplomatic relations with Vietnam. What is important, an atmosphere of co-operation has been established between the two countries.

NAM MEET

ACTION AGAINST APARTHEID

At the eighth meeting of ministers from non-aligned countries held at Luanda, it was decided that Zimbabwe would be the next leader of the non-aligned movement, succeeding India, for the period 1986-89. Zimbabwe, therefore, was chosen as the venue for the next summit, ahead of bids by Yugoslavia and Indonesia.

The principal statement of the ministerial conference was the 'Luanda Special Communique on South Africa' which called on the UN Security Council to impose comprehensive and mandatory sanctions against South Africa and urged South Africa's principal trading partners—West Europe, Japan and the US—to cooperate and "assist the process of genuine change which may still be achieved without major bloodshed". The choice of Luanda is itself significant in this context. In his opening address, President Jose Eduardo dos Santos of Angola said this was "an act of moral solidarity" against South Africa, Luanda being on the doorstep of the apartheid regime. The statement was supported by all the 119 delegations present.

Various other issues were also discussed, among them Kampuchea and the Iran-Iraq conflict. On the first, the delegates upheld the 'empty seat' principle, established at New Delhi. While warning that there was real danger of the tensions escalating in the region, the resolution made no mention of Vietnamese troops in Kampuchea. On the second issue there was a great deal of debate but no consensus was reached. East Timor, the former Portuguese colony which was integrated into Indonesia in 1976, but where local resistance under the anti-Indonesian Fretilin continues, was also discussed, despite Indonesia's strong objections. The issue had been deleted from the agenda in the Havana summit, but Fretilin attended this meeting as the guest of Angola and was supported by Vietnam, Laos, Vanuatu and five Portuguese speaking

African countries. But no consensus could be reached on East Timor either.

The surprise resolution of the meeting concerned New Caledonia. It was proposed by the Vanatu delegation and was accepted by the others. It expressed the support of the ministers for self-determination and the early transition to independence. The issue of the troubled French Pacific territory could thus come up on the UN agenda

UK-USSR

SPY INFESTATION

The First and Second World are apparently crawling with spies. This summer, Soviet agents were unearthed in the US and in West Germany. And in September, Gleg Gordiyevsky, a counsellor in the Soviet Embassy in London and the "resident" in charge of KGB operations in Britain, defected to the West. Gordiyevsky, a cultured, urbane man, about whom Moscow apparently suspected nothing, had been passing information to the West for nearly 20 years. He had earlier been in Copenhagen and was posted to London in 1982 as the deputy of the KGB resident, Arkady Guk. Earlier this year, however, Guk's name came up in the trial of Michael Bettaney, a British MI 5 employee who tried to sell secrets to the Russians, and was expelled, and Gordiyevsky became the topmost KGB agent in Britain. The information he has been passing has been very valuable and his analysis, according to sources, have shaped PM Margaret Thatcher's speeches regarding the Soviet Union.

The question arises as to why did the double agent decide to come in from the cold, especially when his wife and children are on the other side of the Iron curtain. According to speculation, it had something to do with the defection of Hans Joachim Tiedge, to the East in August. If Tiedge had betrayed Gordiyevsky to Moscow, he would feel bound to come out in the open. However, British sources say that Gordiyevsky defected before Tiedge. According to other speculation, he defected because of ideological reasons. He was getting tired of the Soviet public stance of favouring detente and the actual hard-line instructions from Moscow to destabilise his area.

Gordiyevsky's debriefing led to the expulsion of 25 KGB agents from Britain. The Russians retaliated by expelling 25 British diplomats, journalists and businessmen from Moscow. Later, six more were expelled from each side. So far, Moscow has generally refrained from this kind of man-to-man retaliation. In 1971, when Britain expelled 105 Russians from the country, the Soviets responded by ordering the ouster of 18 Britishers. Thereafter in 1981, one man was expelled from each side; in 1982, the British expelled two, the Russians one; in 1983, the British sent back six, the Russians two and last year the equation was one to one. In April this year, five Russians were expelled and the Russians sent back three. The number of 'burnt out' KGB agents has been steadily increasing and the Russians may find it increasingly difficult to send trained agents to the West, who are not already known there.

CENTRAL AMERICA

TORRID ZONE

Anxiety was added to trouble for El Salvadoran President Jose Napoleon Duarte, when his daughter, Ines Guadalupe Duarte Duran, a 35-year-old mother of three children was kidnapped in broad daylight by six armed men. Although no group claimed responsibility, Salvadoran investigators ruled out no one, including the country's right wing death squads. However, suspicion lay more deeply on the leftist Farabundo Marti National Liberation Front (FMLN), who had recently vowed to step up their activities after the government stepped up its air strikes against their rural bases. Although a dozen guerrilla safehouses were searched, there was no sign of the President's daughter who also heads Radio Cadena Libertad, a Duarte-linked radio station.

Further north, Nicaraguan-Honduran relations reached a new low, when Honduras, responding to an attack by Sandinista troops who were pursuing contra guerrillas, on a Honduran border village, launched a massive air attack across the Nicaraguan border, where they reportedly strafed Sandinista mortar batteries and shot down at least one Soviet-built helicopter. The Honduran action is difficult to explain because this was not the first time that Honduran sovereignty had been violated.

Meanwhile, the Contadora group (Colombia, Venezuela, Mexico and Panama) is fast becoming tired of its unsuccessful efforts to bring peace to the region. It had presented a draft treaty to Nicaragua, El Salvador, Costa Rica, Honduras and Guatemala in June 1984, but the treaty had

run into unforeseen complications. On Sep. 12, they presented another draft treaty, which includes a proposal for a corps of inspectors with powers to investigate suspicious activities. Although this provision is not liked by Nicaragua, it was put in at the insistence of Nicaragua's neighbours. The draft also says that detailed negotiations on the putting of arms and armies should start after the treaty is signed.

Negotiations will begin on Oct 7, but if no agreement is reached by November, the Contadora group will give up its efforts. The Contadora process had begun in 1983 with a meeting of foreign ministers of the four countries on Panama's Contadora island. So far, however, their efforts to negotiate a settlement to end cross border subversions, cut armies and arms, encourage democracy and promote human rights in the region have met with little success.

AFGHANISTAN

ANOTHER SOVIET OFFENSIVE

Early in September, Soviet troops launched a major offensive in the eastern Afghanistan province of Pakita in an attempt to relieve a besieged garrison at Khost and seal guerrilla infiltration routes. This offensive was the Soviet Union's third this year, following the massive Kunar offensive in May and June and the Panjsher valley offensive in July. According to a morse telegraph sent by Jalaluddin Haqani, commander of an Afghan partisan group called Hesbi Islam (Islamic Party), the Pakita offensive was the biggest battle of the war. According to Western sources, about 20,000 Soviet paratroopers were involved against a group of about 5,000 mujahideen (Afghan rebels). Under the Soviet assault, the mujahideen resistance around Khost first wavered and then broke.

Besides relieving the garrison and sealing guerrilla infiltration, the Russians, according to American analysis, were also interested in stopping the clandestine CIA arms pipeline that feeds the Afghan guerrillas and in intimidating President Zia-ul-Haq of Pakistan, who has turned a blind eye to the guerrillas operating from within Pakistan. However, it is difficult to either shut off the clandestine arms supply or seal the 1,800 km Afghan-Pakistani border, which has remained open throughout the war. The terrain is difficult and there are numerous caravans' tracks which are known only to the local people.

Meanwhile, the latest round of talks between Pakistan and the Soviet backed government of President Babrak Karmal ended inconclusively in Geneva. The talks, sponsored by the UN, are the main hope so far of a political solution to the turbulence in the region.

FRANCE

SECRET OF THE SUNKEN WARRIOR

Will the *Rainbow Warrior* become President Mitterrand's Watergate? The wind appears to be blowing that way. The *Rainbow Warrior*, a ship belonging to the anti-nuke Greenpeace movement was sunk a few months back off the coast of New Zealand. Two French citizens were held and French newspapers began to allege that the French secret service, the DGSE, had a hand in the affair. In September the prestigious *Le Monde* claimed that senior French officials including Gen Jeannou Lacaze, who was Chief of Staff of the armed services at the time the action may have been planned, Gen Jean Saulnier, Mitterrand's personal military adviser and Admiral Pierre Lacoste, the head of the DGSE, had ordered the bombing of the flagship. It also alleged that Mitterrand, despite his denials, may have known of the affair shortly after it took place, and had sat over it for three weeks and acted righteous and ordered an official inquiry only when the press got wind of it. If this were true, the defence establishment tied to the investigating Tricot.

The Nixonian attempt at a cover up came out in the open later in the month, when PM Laurent Fabius admitted that French secret agents had sunk the *Rainbow Warrior* and had been acting under orders. The French Defence Minister, Charles Hernu and Admiral Pierre Lacoste resigned. The resignations were significant because both these persons were Mitterrand's right-hand men. While Hernu had played a pivotal role in the building up of the Socialist Party, Lacoste had been hand-picked to revamp France's intelligence set-up which had earlier been filled with hardcore right-wingers and which had caused the government much embarrassment in the past. Mitterrand's handling of the affair may affect his political survival if his Socialist Party loses France's parliamentary election next March.

Further, the affair has soured relations between France and nations in the South Pacific. The New Zealand PM has sharply criticised France

(Continued on page 59)

CAREER COUNSELLING

BY G. J. UNNITHAN, Director, Students Advisory Bureau, University of Rajasthan

I am a student of class XII. Does the Indian National Science Academy, New Delhi or the Indian Institute of Science, Bangalore conduct graduation courses in Physics, Chemistry or Maths?

Anupam Thakur, Patna

The Indian National Science Academy, New Delhi is a professional body of scientists and it does not conduct any courses. The Indian Institute of Science, Bangalore admits students to its various courses only after completion of B.Sc. Higher qualifications are also necessary.

Which engineering colleges in India, besides the IITs, conduct courses in Aeronautical Engineering?

Sanjay Mehta, Ahmedabad

Punjab Engineering College, Chandigarh and Anna University (Madras Institute of Technology), Madras conduct courses in Aeronautical Engineering. The latter university admits students only after they complete B.Sc. Jamia Milia Islamia, New Delhi is also planning a course in this subject.

I am a 23-year-old Science graduate. Can I get a class I job in CBI, RAW or in any intelligence department, except in the military?

Deepak Kumar, Muzaffarpur

Yes, you can qualify upto 26 years through the Indian Civil Services Exam, although there is no certainty that eventually you will be assigned to these intelligence departments.

I want to pursue my postgraduate studies in Agricultural Science in Australia. What is the procedure regarding entrance test, scholarship, etc?

Suneel Bhan, Srinagar

First, you must contact the Australian High Commission, Shanti Path, Chanakyapuri, New Delhi to obtain form M 146 on which you will apply for eligibility for higher studies in Australia. Universities conducting courses in different branches of Agricultural Science include: University of Adelaide, GPO Box 498, Adelaide, Australia 5001; University of Melbourne, Parkville, Victoria, Australia 3052; University of Queensland, St Lucia, Queensland, Australia 4067; University of Sydney, New South Wales, Australia 2006 and the University of Tasmania, GPO Box 252 C, Hobart, Tasmania, Australia 7000. The universities provide you with further details

about admission (no entrance test) and scholarships.

Please give me details about forestry courses offered in India.

Kalyan Das, Birbhum

You may contact the College of Forestry, Kanke, Ranchi-834 006 which conducts a three-year course after intermediate with Science, Biology or Maths.

I am a class XII student and I want to make agricultural research my career. Please provide detailed information regarding the institution or university I should enrol in and the procedures for getting admission.

Nazim Alam, Mussoorie

There are more than 20 agricultural universities in India with facilities for advanced research in a large number of specialised subjects. You will first have to take admission to the B.Sc. (Ag.) course which is of three to four years duration and then complete an M.Sc. (Ag.) course of two years duration. In UP you may apply to the G.B. Pant University of Agriculture and Technology, Pant Nagar-263 145; C.S. Azad University of Agriculture Science, B.H.U., Varanasi-210 005 or the Allahabad Agricultural Institute, Allahabad-211 007. The first three universities have an entrance test and advertise early in the year. Besides these specialised institutes, there are many colleges in UP which conduct B.Sc. (Ag.) courses.

I am a first year student of B.Com. I want to become a cine director-cum-photographer. Which organisation/institute conducts this course? What is its duration?

R. Ravichandran, Madras

The Film and Television Institute, Pune-411 004 conducts courses in film direction and motion picture photography for graduates. The duration is three years.

Kindly let me know whether admissions are open to Indian students in the Asian Institute of Technology, Bangkok. If so, then please give the necessary details.

Milind Mishra, Amravati

The Asian Institute of Technology (AIT), G.P.O. Box 2754, Bangkok 10501, Thailand, conducts postgraduate and doctoral courses in (1) Agricultural and Food Engineering (2) Computer Applications

(3) Energy Technology (4) Environmental Engineering (5) Geo-technical and Transportation Engineering (6) Human Settlements Development (7) Industrial Engineering and Management (8) Structural Engineering and (9) Water Resources Engineering. Admissions are conducted in January, May and September for different courses. Candidates must have a four-year bachelor's degree in the appropriate field with well above average grades and be fluent in English. The total cost per annum is approximately US \$11,000. A limited number of scholarships are available both from AIT and other donors.

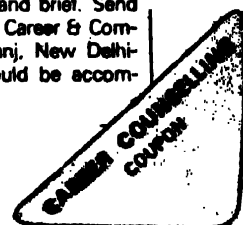
What exams does one have to take to qualify as a company secretary? I would also like to know in detail about the educational qualifications required and the age limit.

Sudha Malhotra, Jamshedpur

The Institute of Company Secretaries of India, ICSI House, 22 Institutional Area, Lodi Road, New Delhi-110 003 is the statutory institute for conducting exams for company secretaries. In order to become eligible as a student, a candidate must be 18 years of age and should have passed the preliminary exam of the institute after graduation. Exemption from the preliminary exam is given to degree holders with 50% marks or master's degree holders of certain other categories of graduates. Subsequently, there is an intermediate exam and a final exam. Registration is possible at the beginning of every month, oral or postal tuition is compulsory. The prospectus containing full details, application forms, syllabi, etc may be obtained from the secretary of the institute on payment of Rs 5 plus postage.

NOTE TO READERS

Before rushing in your career problem, check if it can be solved by looking up our sections on *Careers* or *Career Counselling* in the earlier issues. Space is limited; the mail received is staggering. Letters chosen are those of general interest or in particular cases where the information is hard to find or has not been published before. Many readers ask for a personal reply. Sorry, this is not possible. So please don't send postage or envelopes. Make your queries specific and brief. Send them to Career Counselling, Career & Competition Times, 10 Daryaganj, New Delhi-110 002. Your letters should be accompanied by the coupon.



FOR & AGAINST

BY ILA SRIVASTAVA

Should The Business Community Be Socially Committed?

In recent years the social aspect of business has been a much discussed and much debated topic throughout the world. The issue: whether business is an identity distinct and separate from the society in which it functions or has it, over the years, entwined itself with society to such an extent that the impact of its functioning on the life of a common man can no longer be ignored? Should the business community mind its own "business" away from the mainstream of society or should it shoulder social responsibilities in tune with its rapidly expanding interests?

The arguments in favour of business shouldering social responsibilities are propagated by a band of modern thinkers led by George Steiner. The arguments against the need for social consciousness among businessmen are inspired by the works of Milton Friedman.

For

■ Corporations are made by society and should therefore respond to the demands of society. The success of a business in itself is clear evidence of the social value of that business over its less successful competitors. It operates within a set of powerful cultural norms and the businessman knows that changes in them must be incorporated in his decision-making process.

■ The long-run self-interests of business are best served when business assumes social responsibilities. Arjay Miller feels that under current conditions, management cannot effectively discharge its responsibilities to shareholders unless it also behaves responsibly with employees, customers, government and the public at large.

■ The era of purely private business for private profits is gone. Today it is the duty of business to report to the public, whose money it is constantly borrowing in order to conduct business. This implies that bearing social responsibility is a moral responsibility.

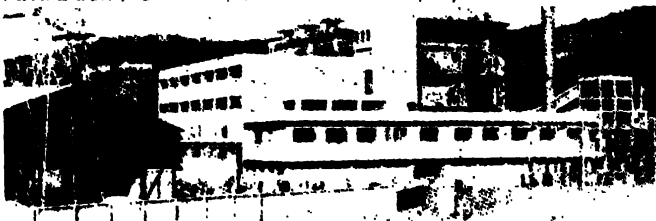
■ Even if business is considered to be an economic activity, economic considerations cannot be allowed to override social considerations or be isolated from a value framework without endangering social values.

■ Since many social and ecological problems are created by business activities it is the moral duty of businessmen to deal with these problems.

Against

■ Business is basically an economic institution the function of which is to produce and make profits; maximisation of profits is the only guiding factor.

■ The government is the only organisation which is responsible and accountable to the general public comprising the society. It alone should discharge social functions. The corporations merely have a complementary economic role to play.



■ Over the years the corporations have become so accustomed to performing their economic role that they cannot be expected to effectively deal with social problems. They are habituated to thinking only from the economic perspective.

■ Even as late as 1963, Milton Friedman wrote that there was only one social responsibility of business - to use its resources and engage in activities designed to increase its profits.

■ The only moral duty of business is to sustain work efficiency so that the economic balance of society is undisturbed.

LATEST IN SCIENCE

Comet Rain

ACCORDING TO the mass extinction theory, every 26m years or so, a rain of comets that lasts hundreds of thousands of centuries bombards the earth. The impact of these comets generates clouds of debris in the atmosphere which block the sun. When this happens temperature on earth drops and a majority of the existing plant and animal species perish.

Earlier theories believed in primordial floods or volcanoes. Some responded to the lure of Darwin and insisted that old creatures gradually give way to the supremacy of the new. But as geology became more precise, scientists determined at least five great dyings in the last 600m years which disproved earlier theories.

In spite of evidence of destruction the cause could not be determined. Till 1977 the search for the cause was directed towards the earth. In 1977,

geologist Walter Alvarez's find made scientists look heavenwards for the answer. Alvarez had found a high concentration of an element known as iridium in between a layer of rock belonging to the Cretaceous period and another belonging to the present Tertiary period. The high concentration of iridium pointed towards the cause of the sudden disappearance of creatures of the Cretaceous period. High concentration of iridium occurs in only three places: in the earth's core; in the cosmic dust drifting to earth from a nearby supernova (exploding star) or from extra-terrestrial objects like asteroids and comets. The first two possibilities were ruled out and the last seemed most plausible. After this startling theory, many more scientists provided additional arguments to back it up. One statistical study concluded that these mass extinctions occurred every 26m years.

Three theories have been propounded

to explain this cycle. The first says that whenever the sun passes through the Milky Way plane, the swirls of dust it encounters would gravitationally disrupt a vast bubble of comets (called Oort cloud) which would start hurling comets towards the sun. However, this cycle would occur every 33m years. The second theory assumes the existence of a companion star to the sun, called Nemesis, which disrupts the Oort cloud and sends comets to the earth. The third theory is based on the tenth planet of the solar system, Planet X. It follows a sharply inclined elliptical orbit that continuously shifts because of the gravitational tug of the other planets. Every 28m years the shifting orbit intersects a disc of comets that lies beyond the orbit of Neptune. As Planet X passes through the disc, it dislodges comets, sending them towards earth.

None of these explanations is fully satisfying and scientists are now trying to find solutions by looking heavenwards through their telescopes.

A S.

TELEVISION VIEW FROM THE TOP



V.N. Gadgil, Minister of Information & Broadcasting, in an exclusive interview with Y.C. HALAN & JYOTSNA SHARMA, assesses the hardware and software development of the Indian TV—as well as the role the small screen plays as a medium of mass communication.

Mass media in India—television, radio, newspapers, films—have, over the years, made rapid strides. But television in particular has to its credit the most phenomenal progress. It has become the most powerful and effective medium of mass communication. That too within a time span of less than four years. Its coverage has expanded from an inadequate 20% to a remarkable 70%. The country at the moment has an estimated 5m TV sets and in terms of population television has a reach of approximately five crore people. And with new transmitters being installed in rapid succession to bring even the remotest parts of India under the TV network, these figures are likely to register a substantial increase in the near future.

And while this expansion in terms of hardware goes to the government's credit, it has increased the responsibilities of the Information & Broadcasting (I & B) Ministry manifold. For it requires software planning on the same scale. The Minister for Information & Broadcasting, V.N. Gadgil, discusses the various aspects of television expansion in India.

On Impact of TV

According to the minister, both TV and radio enjoy widespread popularity among the Indian populace right from the urban elite of metropolitan cities to the illiterate rustics of far flung villages. In fact, this popularity has had an impact on the lives of the people in a radical way. It has affected their literary pursuits as well as social life. Cities like Bombay and Poona, Gadgil reminisces, where once it was difficult to

go out for a walk on Sunday evenings owing to the overcrowded roads and streets, now bear a deserted look as the majority of the people are engrossed in watching their favourite programmes on TV. And to illustrate the growing awareness among the villagers and the popularity of TV in villages, he cites an incident. Last year, while in the Communications Ministry, Gadgil visited a small village in north India. Addressing a meeting of farmers he asked them what they wanted for their village. A 70-year-old kisan immediately stood up and asked him to provide the village with a telephone and a TV. When the rather surprised Gadgil informed him that TV was the province of H.K.L. Bhagat, the then Minister of I & B, pat came the septuagenarian's reply: 'Woh to programme ka hi karten hain, lines to aap deten hain'. (He only looks after programmes; you provide the lines.) This incident, the minister feels, reflects the hunger for development even among the illiterate rustics.

On youth and children's programmes

Special attention is being given to improving youth programmes and programmes for children both quantitatively as well as qualitatively. And for this Gadgil has decided to increase the time allocated to these programmes. To improve the standard of children's programmes arrangements are being made to buy Walt Disney films as well as children's films from Canada, USSR and Czechoslovakia which are known for their advancement in children's films. Czechoslovakia is, in fact, the leader in producing animation films.

As far as programmes for youth are

CALLING READERS

"Indian TV—Changing The Scene"

"Development of the Indian TV during the past four years has been remarkable. So much so that TV has become the most effective instrument of communication with the masses. No longer is the Indian small screen viewed as an idiot box. However, there is still scope for further improvement.

- What function should the TV perform—Educate, entertain or alleviate the masses?
- Should autonomy be granted to Doordarshan?
- In what ways can the software (programmes) be improved?

Readers are invited to express their opinions on all the above topics in not more than 250 words each.

Please send in your entries latest by **November 25**. The best three entries will receive cash prizes worth **Rs 150, Rs 100 and Rs 75**. Address your entries to The Editor, Career & Competition Times, 10, Daryaganj, New Delhi-110 002.

concerned, Gadgil agrees that more programmes on science and education should be introduced. But this, according to him, is not the sole responsibility of his ministry. The UGC programmes are, for example, produced by the Ministry of Education. However, the government is now planning to televise model lectures and lessons presented by the best teachers of various states in a nutshell and sell the video recordings of these to schools and colleges. Also, the Ministry of Sports and Youth Affairs will advise Films Division to make documentaries designed to inform and educate young people. Further, TV interviews with famous sports personalities will be telecast frequently to cultivate an interest in sports among the youth. And, quite interestingly the I & B Ministry is contemplating the introduction of serials based on Hindu mythology in which mythological heroes are portrayed as youth leaders. These serials will essentially be designed to familiarise young people with their culture. Even newspapers will be persuaded to carry youth columns to give young people adequate coverage.

On TV serials

The main functions of the mass media, says Gadgil, are to inform, educate, entertain and, if possible, elevate. Therefore, the attempt in serials too is to elevate even as they entertain. Each serial hence brings a social message. However, he agrees that there is lot of scope for improvement for while the production is slick and at par with foreign serials the content is lacking. Most serials shown on TV nowadays are urban-oriented. Gadgil feels that a change of class is required and that serials should also deal with the lives, problems and aspirations of the lower classes e.g. life of people living in a chawl in Bombay or slum dwellers in Delhi. Then, serials will be produced in Bombay, Calcutta and Madras too.

As far as the selection of sponsored programmes is concerned, he concedes that a handful of bureaucrats cannot decide what programmes the entire country should see. Also, the government is accused of partiality and favouritism while selecting sponsored programmes from amongst the innumerable programmes produced. And it is to resolve these problems that the government has now decided to set up a committee of officials and non-officials to select sponsored programmes and feature films. The committee will be constituted by highly respected people like senior retired judges and academics. This will ensure fair and unbiased selection of good programmes.

Other programmes

Doordarshan has started 14 informative and general awareness programmes such as Focus, Panorama, Folk Arts of India Premier Institutions of India. Gadgil also

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suggests the screening of programmes designed to inculcate national integration among the masses. Programmes dealing with places of historic interest or people promoting national integration in some way can be televised. Here he gives the example of Ghulam Ali who despite being a Muslim has an absolute mastery over thumri and dadra. He also narrates his meeting with a Russian lady who had an excellent command over Marathi language.

Then, in order to improve the quality and content of news, Gadgil says all efforts are being made to improve newsgathering and news presentation techniques. News on TV requires a good selection of items accompanied by effective and appropriate visuals as far as possible. For this the I & B Ministry is inviting the services of freelance reporters and cameramen with initiative and news sense. Also it is planning to have studio facilities and outdoor broadcasting vans operating in all the state capitals to give timely and adequate coverage of important events.

To give adequate coverage to local programmes in various states the I & B Ministry has asked for the sanction of three transponders in the next satellite—INSAT-IC. If this is granted then adequate coverage can be given to regional language programmes for states.

Gadgil also feels that professionalism is needed in the media set-up in the country. The lack of professionalism has led to a decline in standards of production. Which is why professional producers are being engaged to produce quality programmes for Doordarshan. The government is also planning to start an all-India service called the Indian Broadcasting Service to improve the planning and programmes on AIR and Doordarshan. Consisting of the management cadre and programme cadre it will comprise of people with professional backgrounds.

Autonomy for AIR and Doordarshan

While programmes like Janvani, where Cabinet ministers answer questions put to them by a select audience representing the country, have gone a long way in increasing the credibility of Doordarshan, they are also one tentative step in the direction of total autonomy, which, Gadgil says, may be possible some years hence. For the moment, however, the country is not ready for it. What the government may do in its place is give complete editorial freedom to AIR and Doordarshan, subject to the guidelines of a media advisory committee.

In any case Gadgil is the last Cabinet Minister scheduled to appear in the Janvani programme. To answer on camera the queries of the masses with regard to his portfolio. And the last programme will feature none other than the PM himself. ■

TV ADS

DATA INTERPRETATION-3

BY S.P. GUPTA & M.P. GUPTA

A confident administrator knows how to translate abstruse data into readily digestible figures and graphs. It is a confidence that every administrator must have and the ICS Mains in particular look for it. Here we conclude our series on data interpretation designed to help you face some of the challenges of administration with verve and confidence.

Problem 1

Present the following information in a suitable tabular form:

In 1970 out of a total of 1,750 workers of a factory, 120 were members of the trade union.

The number of women employed was 200, of which 175 did not belong to a trade union. In 1975, the number of the union workers increased to 1,580 of which 1,290 were men. On the other hand, the number of non-union workers fell down to 208, of which 180 were men.

In 1980, there were 1,800 employees, who belonged to the trade union and 50 who did not. Of all the employees in 1980, 300 were women of whom only 8 did not belong to the trade union.

Interpretation

Table showing the sex-wise distribution of union and non-union members for 1970, 1975 and 1980

Category	1970			1975			1980		
	Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male	Total
Members	1,175	25	1,200	1,290	290	1,580	1,508	292	1,800
Non-members	375	175	550	180	28	208	42	8	50
Total	1,550	200	1,750	1,470	318	1,788	1,550	300	1,850

Problem 2

In a sample study of coffee-drinking habits in two towns, the following information was received:

Town A: Females were 40%; total coffee-drinkers were 45% and male non-coffee-drinkers 20%.

Town B: Males were 55%; male non-coffee-drinkers were 30% and female coffee-drinkers 15%.

Represent the above data in tabular form:

Interpretation

Table showing the coffee-drinking habit of towns A and B

Attribute	Town-A			Town-B		
	Males	Fe- males	Total	Males	Fe- males	Total
Coffee-drinkers	40	5 ¹	45	25 ³	15	40 ^b
Non-coffee-drinkers	20	35 ²	55	30	30 ⁴	60 ^b
Total	60	40	100	55	45	100

S.P. Gupta is a Reader at the Faculty of Management, University of Delhi. And M.P. Gupta teaches in the Department of Commerce, Bhagat Singh College, University of Delhi.

Notes

1. Total coffee-drinkers in Town A were 45%. Therefore, non-coffee drinkers were $100 - 45 = 55\%$. Since total female coffee-drinkers were 40%, male coffee-drinkers $(100 - 40) 60\%$.

Male non-coffee-drinkers were 20%. Therefore, male coffee-drinkers $(60 - 20) 40\%$. Hence, female coffee-drinkers were $(45 - 40) 5\%$.

2. Female non-coffee-drinkers were $(55 - 20) 35\%$ in town A.

3. In town B, as per given information, total males were 55%. Therefore, total females were $(100 - 55) 45\%$. Since male non-coffee-drinkers were $(55 - 30) 25\%$.

4. Since female coffee-drinkers were 15%. Therefore female non-coffee-drinkers were $(45 - 15) 30\%$.

5. Total male and female coffee-drinkers will be $25 + 15 = 40\%$.

6. Total non-coffee-drinkers were $(100 - 40) 60\%$.

Problem 3

Out of a total number of 1,807 women who were interviewed for employment in a textile factory of Bombay, 512 were from textile areas and the rest from non-textile areas. Amongst the married women who belonged to the textile areas, 247 were experienced and 73 inexperienced, while for non-textile areas, the corresponding figures were 49 and 520. The total number of inexperienced women was 1,347 of whom 111 resided in textile areas. Of the total number of women 918 were unmarried and of these the number of experienced women in the textile and non-textile areas was 154 and 16 respectively. Tabulate the given information.

Interpretation

I. The total number of women interviewed = 1,807. Number of women from textile areas = 512. Therefore, the number of women from non-textile areas = $1,807 - 512 = 1,295$.

Total number of married women in textile areas = $247 + 73 = 320$.

Total number of married women in non-textile areas = $49 + 520 = 569$.

Total number of inexperienced women = 1,341.

Thus, the total number of experienced women = $1,807 - 1,341 = 466$.

Total number of unmarried women = 918. Therefore, the total number of married women = $1,807 - 918 = 889$.

Total number of unmarried experienced women in textile areas = 154.

Total number of unmarried experienced women in non-textile areas = 16.

II. The attributes given in the problem are

(a) Married and unmarried women

(b) Textile and non-textile areas

(c) Textile and non-textile areas can be sub-divided into experienced and inexperienced.

The above information can be tabulated as under:

Table showing the number of women interviewed for employment in a textile factory according to their marital status, experience, etc.

Table

Marital Status	Textile Areas			Non-textile Areas			Total		
	Exp.*	In-exp.*	Total	Exp.	Inexp.	Total	Exp.	Inexp.	Total
Married	247	73	320	49	520	569	296	593	889
Un-married	154	38	192	16	710	726	170	748	918
Total	401	111	512	65	1,230	1,295	466	1,341	1,807

* Exp. = experienced; Inexp. = inexperienced.

Problem 4

Comment on the following statements:

(a) The profits of firm A are Rs 70,000 for the year 1984; and the profits of firm B, for the same period, are Rs 90,000. Therefore, firm B is better than firm A.

(b) 80% of those who smoke develop indigestion in middle age. Hence smoking leads to indigestion.

(c) National income of the US is more than that of India.

(d) Per capita income of India for 1984-85 is four times as high as in 1964-65. Therefore, people are four times better off in 1984-85 as compared to 1964-65.

Interpretation

(a) On the basis of the given information, it can be concluded that firm B is better than firm A. But for this purpose, we have to take into account many other variables like the amount of capital investment in both the firms. It is possible that when the comparison is made between the ratios of gross profits to capital investment, the result may be the reverse.

(b) This type of generalisation is not valid, unless proper proportion of the smokers and non-smokers is ascertained in the total population. Then we can find out the number of persons suffering from indigestion out of smoking population. The percentages, then can provide the true picture in this connection. Secondly, indigestion may not be only on account of smoking, but may be on account of other causes too. Therefore, different causes are to be analysed for the validity of the statement.

(c) For comparison purposes, it is necessary that the definition of national income is taken to be the same in both countries. For example, one country includes the income of the housewife in the computation of the national income and the other country does not with the result that the whole conclusion will become erratic.

(d) In this connection it is necessary to study the behaviour of the prices during this period. If there is no change in the prices during this period only then can we draw this conclusion.

Problem 5

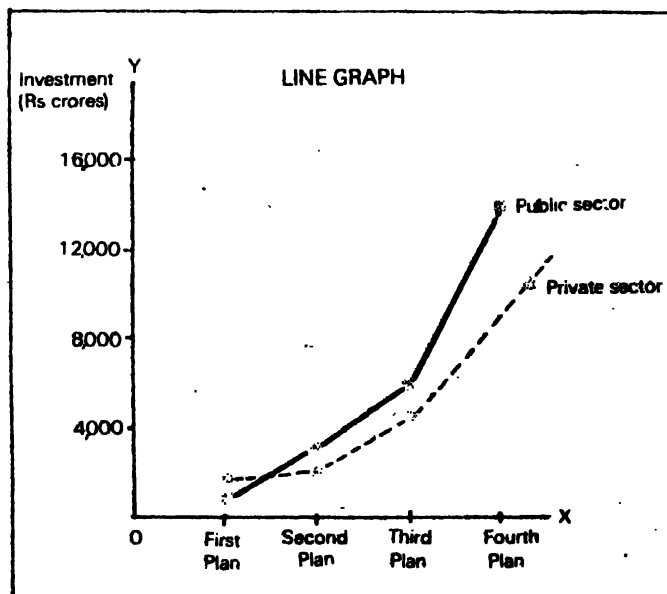
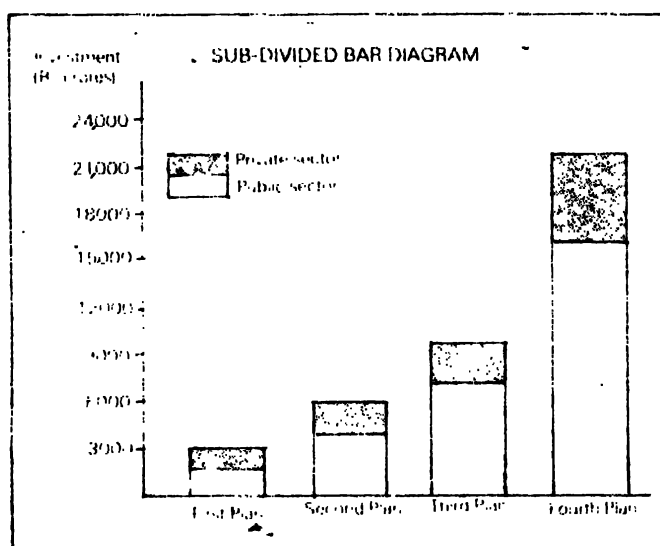
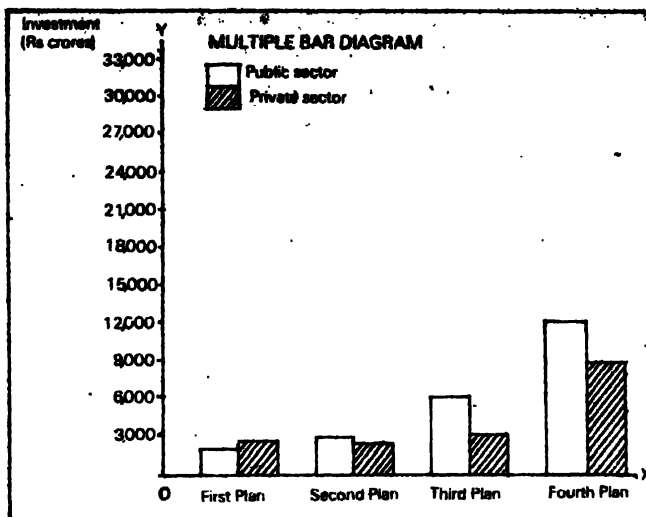
Represent the given information with the help of suitable diagrams:

Pattern of investment in organised industrial sector (Rs crores)

	Public sector	Private sector	Total
First Plan	1,560	1,800	3,360
Second Plan	3,650	3,100	6,750
Third Plan	6,300	4,100	10,400
Fourth Plan	13,635	8,980	22,615

Interpretation

The above information can be presented with the help of different diagrams and graphs. The possible diagrams can be— (a) Multiple bar diagram, (b) Subdivided bar diagram and (c) Line graph.

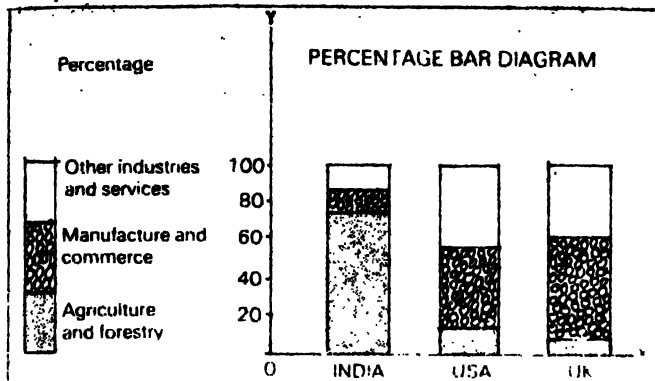


Problem 6

Draw a suitable diagram to represent the following data on livelihood patterns in India, the US and the UK:

Occupation	India	USA	UK
Agriculture and forestry	71%	13%	5%
Manufacture and commerce	15%	46%	55%
Other industries and services	14%	41%	40%
Total	100%	100%	100%

Interpretation



that there is more dependence on agriculture and forestry for livelihood in India than in the US and UK. Similarly, the UK is more dependent on manufacture and commerce than India and the US.

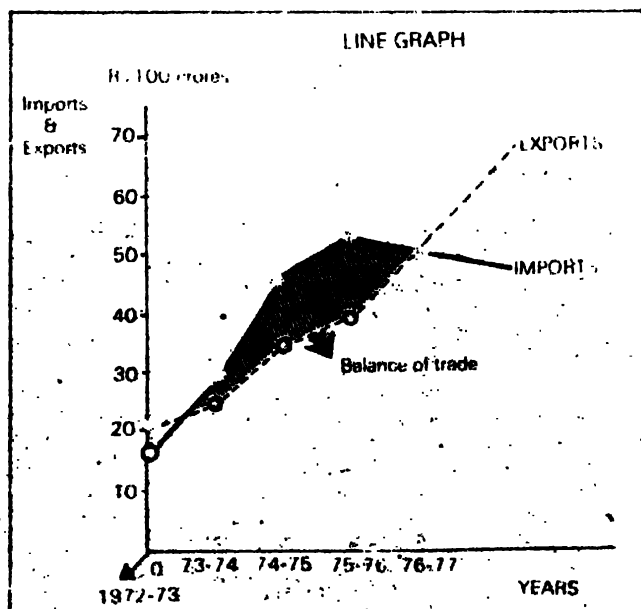
Problem 7

Construct a suitable diagram to represent India's imports and exports for the following years:

Year	Imports (In hundred crores rupees)	Exports
1972-1973	19	20
1973-1974	30	25
1974-1975	45	33
1975-1976	53	40
1976-1977	51	51

Interpretation

In this connection multiple line graphs can be drawn to indicate imports and exports in India.



Problem-8

Present the following information in a concise tabular form and indicate which type of lamp shows the greatest wastage during manufacture.

Lamps are rejected at several manufacturing stages for different faults. Twelve-thousand glass tubes are supplied to make 40-watt, 60-watt and 100-watt lamps, in the ratio of 1:2:3. At stage I, 10% of 40-watt, 4% of 60-watt and 5% of 100-watt bulbs are broken. At stage II about 1% of the remainder of the lamps have broken filaments. At stage III, 100, 100-watt lamps have badly soldered caps, and half as many have crooked caps; twice as many 40-watt and 60-watt lamps have these faults. At stage IV, about 3% are rejected for bad type marking and 1 in every 100 are broken while packing.

Interpretation

Wastage of electric lamps during manufacture

Power of lamps (Watts)	Total no of glass tubes supplied	Number rejected at stages						Rejections Total %
		I Broken bulb	II Broken filament	III Bad cap	IV Bad marking			
40	2,000	200	18	300	59	577	29	
60	4,000	160	38	300	140	638	16	
100	6,000	300	57	150	220	727	12	
Total	12,000	660	113	750	419	1,942		

40-watt bulbs have the greatest wastage during manufacturing, i.e., 29%.

(Concluded)

HELLO GOOD BUY!



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Since a manager is expected to think logically and fast, efficient time-management becomes a crucial factor in the decision-making process. No wonder this is a characteristic feature of the written hurdle as well. "The candidate just cannot afford to play loose with time. Inefficient time-management has spelt the downfall of many a brilliant aspirant," said a first year student.

How does one go about mastering this art? Practice is the key word. Without it not even the best brain can beat the CAT. Practice develops the ability to withstand pressure and avoid mental exhaustion. It assists in checking the tendency to misinterpret simply-worded questions. At least a month before the exam, the candidate must start regular daily practice using sample test papers. It goes without saying that hardly much purpose would be served if the duration of the actual test is ignored while practising. The B.E. from BHU underscored this point when he said that "practising for shorter durations would not help one in guarding against mental exhaustion". The paper is designed in such a way that without the backing of consistent practice, the candidate will not be able to maintain his speed. He is bound to slow down.

Once the month has flown past and the candidate finds himself actually sitting in the grim reality of the exam hall, he must remind himself to spend the first five minutes going through the entire question paper. To identify the questions which he thinks he can manage without much ado, and after finishing off with them, to attempt the more tricky ones. Applying this strategy can be of tremendous help in avoiding wastage of precious time. The B.E. felt that probably another reason why he did not make it in the first try was because he spent a lot of time vainly attempting the difficult questions. Finally when zero-hour was fast approaching he realised he was leaving scores of easy questions absolutely untouched. He said, "Since there is negative marking it is more desirable to attempt the easy questions



first, the chances of getting them correct being much higher."

Another tip on time-management. While attempting the section on English, it is advisable, according to a second-year, to first read the questions that follow the given reading comprehension passage and then read the passage. This will help the candidate to pick out quite a handful of answers while giving it the very first reading itself. He may even find all the answers.

An attitudinal aspect that needs to be emphasised here is the importance of not taking easy questions for granted. One tends to become careless while attempting such questions. Caution must be exercised so that barely noticeable twists can be detected and the correct answer ticked.

On the other hand, some questions are worded in such a way that they appear difficult. Whereas they are extremely simple requiring application of basic knowledge. If the candidate enters the hall with the preconceived notion that such questions are not going to be asked, he is in for trouble. Therefore, it is important to take each question for what it is worth, not imposing one's own value or standard judgment. A second-year felt that having such an attitude can go a long way in ensuring a place for the candidate in the final list.

The psychological factor is equally important while combating the written test. The candidate may have performed miserably in a particular section. But he should take care not to allow that to mar his performance in the other sections. The experience of a second-year should clarify this point. He performed disastrously in the English section. He was just beginning to feel discouraged and on the verge of giving up when he somehow managed to recoup his confidence and with gritted teeth attempted the other two sections.

He did them well though he did not hope for much in the results. He was indeed taken by surprise when he actually received a call for the group discussion and interview. "Practice helped me develop an inner resilience which stood me in good stead at that crucial moment when I did not know whether to stop or to go ahead."

Since negative marking haunts exams like the CAT, it is imperative that if one is even slightly uncertain about a particular question, it should be avoided like the plague. Guessing games can prove to be very costly indeed. As one second-year remarked, "It is better not to attempt a question one is uncertain about and get zero rather than tick it and get minus marks in the process. One just cannot afford to take chances with exams like these." If, however, one is confident that he is mother fortune's blue-eyed boy, then perhaps he can venture to take the risk. But even here, the possibility is always there that for some inexplicable reason, he might have fallen out of favour.

As far as the group discussion and interview are concerned, nothing much can be done by way of meticulous preparation. What one must do, however, is to brush up one's basics in his or her subject (s) of specialisation. This is an absolute must because, as the B.E. remarked, "The board seems to have a fetish for basics." Almost all the students interviewed were, it appears, thoroughly drilled. Thankfully, their fundamentals were not shaky and they managed to steer clear from the reject list.

"Many candidates suffer from the misconception that one should speak a lot in the group discussion," said a first-year, who apparently spoke just once or twice and that too only towards the tail-end. Even a single 'sense-packed' sentence can work wonders. If the candidate is unfamiliar with the topic, then it is advisable to listen very carefully to what is being said by the other participants. A lot of facts can be discerned this way. And then after juggling around with them for a while, one can come out with something that is refreshingly original and based on logic and common sense. Restraint, therefore, is another point to be borne in mind. The desire to impress should be curbed. Being one's natural self and speaking only when convinced that he has something worthwhile to say can pay rich dividends. Of course, simultaneously, one must be alert and actively looking for a suitable opportunity to speak.

In the final analysis, attitude plays as important a role as consistent and thorough preparation in the attempt to make it to the IIMs or, for that matter, any institute or faculty of repute.

V.K.

(Concluded)

HOW TO TACKLE CAT-3

BY EDGAR THORPE

Smooth administrative functioning depends on the ingenuity of an efficient manager, who, in turn must possess the ability to reason out each one of his decisions. Tackle these Data Sufficiency Tests, which involve the use of your reasoning abilities, and you would have won an easy battle with the tough CAT that guards the IIM doors.

DATA SUFFICIENCY TESTS

The ability to reason judiciously and correctly is the foremost requirement of managers who have to take the right decisions in day-to-day administrative functions. The Data Sufficiency (DS) tests involve logical deduction of data from a given set of facts in order to answer the question. Through DS tests the candidate's reasoning ability with regard to the basic knowledge of Arithmetic, Algebra, Geometry is tested. There are usually 15-20 questions in the DS section of CAT to be answered in 15-20 minutes. **The questions are given in the order of increasing difficulty.** In order to tackle this section one must first develop a comprehensive understanding of both the format and the type of questions asked.

The Format

The DS tests are generally based on the following format. There may, however, be differences in the construction of sentences.

Directions: Each of the following problems has a question and two statements, which are marked (1) and (2). Use the data given in (1) and (2) together or separately along with other available information (your own knowledge) and decide whether the statements are sufficient to answer the question:

(A) If you get the answer from (1) alone but not from (2) alone

(B) If you get the answer from (2) alone but not from (1) alone

(C) If you get the answer from (1) and (2) together, although neither by itself is sufficient.

(D) If statement (1) alone and statement (2) alone are sufficient

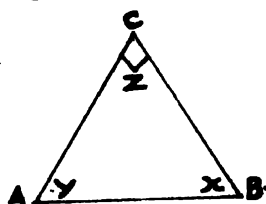
(E) If you get the answer from statements (1) and (2) together but need more data or do not get the answer from (1) and (2) either alone or together.

Example

1. Find the length of AB, if z is 90° and $CB = 6''$.

(1) $CA = 6''$

(2) $x = 45^\circ$



Answer: Since z is a right angle, $(AB)^2 = (CB)^2 + (CA)^2$, so $(AB)^2 = (6)^2 + (CA)^2$ and AB will be positive square root of $36 + (CA)^2$. If you find the length of CA, you can solve the problem.

Statement (1) gives $CB = 6''$, thus $(AB)^2 = 36 + 36$, so $AB = 6\sqrt{2}$. Hence statement (1) is sufficient.

Statement (2) gives $x = 45^\circ$ but since the sum of the angles in a triangle is always 180° and z is 90° , then $y = 45^\circ$. So x and y are equal (45° each), that means sides opposite x and y must be equal to $CB = CA$. Thus $CA = 6$ and $AB = 6\sqrt{2}$. So statement (2) alone is also sufficient to solve the problem. Therefore, the answer is (D), i.e., "if statement (1) alone and statement (2) alone are sufficient".

Other DS Tests

The DS section usually consists of four parts, viz:

- (1) the given (original) information
- (2) the question that is asked based on the given information in part (1)
- (3) statement (1)—from which the answer has to be drawn
- (4) statement (2)—from which the answer has to be drawn

Part (1): The information given in the beginning of the question including any geometrical diagram forms part 1 of the DS question format. For instance, "Find the area of a rectangle if its length is 20 cm"

or "If 10 workers lay 100 bricks on a floor measuring...sq ft, how many workers are needed to complete the job in... days?" In other words, the information given is in the form of a definite statement.

Part (2): A question is either given in the information sentence itself as in the above example or followed afterwards by the information part of the format. Generally the question part is presented in two forms and pertains to mathematical problems.

Asking a specific number in an answer, e.g. "What is the area of the rectangular figure shown in the diagram below?" In such cases an answer can be got only from one and only one number fits the information.

Requiring "Yes" or "No" as an answer.

In any case, in both instances the answers have to be drawn from the given statements only.

Part (3): The question is followed by two statements, each of which will be given a particular relationship or sometimes even two facts/relationships. You have to decide whether the problem can be solved by using the first statement alone (not the second statement) or second statement alone (not the first statement) or first and second statements together but neither alone or either of the statements alone or none of the statements. Hence there are five alternatives. This can be well illustrated by the following table:

Answer Choice	Is statement (1) sufficient in itself?	Is statement (2) sufficient in itself?	If statements (1) and (2) together are sufficient
A	Yes	No	Not applicable
B	No	Yes	-do-
C	No	No	Yes
D	Yes	Yes	Not applicable
E	No	No	No

From the above you can conclude:

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Answer Choice A: Statement (1) is sufficient to answer the question

Answer Choice B: Statement (2) is sufficient to answer the question

Answer Choice C: Neither (1) nor (2) are sufficient but both together are sufficient

Answer Choice D: Either statement (1) alone or statement (2) alone is sufficient

Answer Choice E: None of the statements singly or jointly is not sufficient (i.e., answer cannot be found from the given statements)

You will note that C and E require consideration of both the statements. If either (1) or (2)/or (1) and (2) together is/are sufficient to answer the question (i.e., answer choices A, B and D) you need not consider choices C and E. C and E are to be considered only when the answer cannot be found from A, B and D.

Hence for determining the sufficiency of one of the statements you will automatically at least eliminate two of the answer choices. This will enable you to make a good guess even if you are not sure of the correct answer. Furthermore, supposing you are considering (C) — both statements together — when the answer is either (A) or (B), it is possible that you are not keeping the information separate in the two statements and think you are using both when one statement is enough. Similarly if you are considering answer choices (A) or (B), when the correct answer is (C), you may be using the information from one answer only while you are considering the sufficiency of the other

However, there are a few rules that need to be observed while tackling the DS section:

(a) Use the data provided in the question and statements (1) and (2).

(b) Apply your basic knowledge of maths.

(c) Also refer to all that you know but the answer has to be confined to the five choices.

(d) If you know the correct answer (solution) to the problem, but find it impossible to derive it from statements (1) and (2) based on the answer choices A to E, do not mention the answer. Just confine yourself to the statements and answer choices.

(e) Carefully observe the diagrams in case of geometrical problems and use your fundamental knowledge to solve the problem. Then see the answer choice.

(f) Long and lengthy computations should be avoided due to paucity of time. You should try to quickly understand the problem and answer from the choices given underneath. In case of difficulty, go to the next question and return to this after finishing all the other questions, if time permits.

(g) Simplify the information (part 1) from one of the statements and try to see if the question can be answered from it. Now add the information from the other statement (without taking into consideration the first statement) and see if that is sufficient to answer the question. If neither of the two statements is sufficient to answer the question, consider whether both the statements together are sufficient for the purpose. In the latter case, each statement must contain part of the information to solve the question.

(To be concluded)

DEVELOPING FADS IN DEUTSCHLAND



The West Germans are doing their bit for international understanding by wearing Tunisian shirts, Taiwanese men's suits and Indian sportswear. In keeping with Finance Minister, Gerhard Stoltenberg's assertion that Bonn is interested in helping the Third World develop, the FRG, in 1984, imported garments and textiles worth 32b marks, mostly from developing countries. The Cologne-based German Finance Company that assists in investments in developing countries has provided funds amounting to 1.3b marks for German private sector investments in developing countries.

Practice Tests

In preparing these tests, we have tried to visualise the questions you are likely to face in your actual exam. Great care has been taken to frame questions which are of the same standard as those you will encounter in your exam.

Rating: Evaluate your performance on the basis of the following score-card

- 100 questions in 60 minutes-Excellent
- 60 questions in 60 minutes-Good
- 50 questions in 60 minutes Fair
- 35 questions in 60 minutes-Poor

Tips: 1. Do not waste time over questions you are not sure about 2 Give the problems some thought before choosing the answers 3 Read the directions carefully before answering the questions. 4. Do not try to guess the answer

Data Sufficiency Tests

FOR CAT

Having familiarised yourself with the first four sections of the Common Admission Test (CAT), get set to juggle with these Data Sufficiency Tests so as to orient your reasoning abilities, under stress.

Time: 32 minutes

Scores: 1. Give yourself one mark for each correct answer.

2 Deduct one mark for each wrong answer.

Then rate yourself as follows:

Excellent35-40 Very Good... ..29-34 Good ...23-28 Fair 17-22 Poor.....Below 17.

DIRECTIONS For each of the following questions tick mark the choice that best answers the questions. Answers are given at the end of this test

Directions Each given question is followed by two statements numbered (1) and (2). You have to determine whether the data given in the statement/s is sufficient to answer the question and choose one among the five possible answer choices given below

(A) If statement (1) alone is sufficient to answer the question but statement (2) alone is not sufficient,

(B) If statement (2) alone is sufficient to answer the question but statement (1) alone is not sufficient,

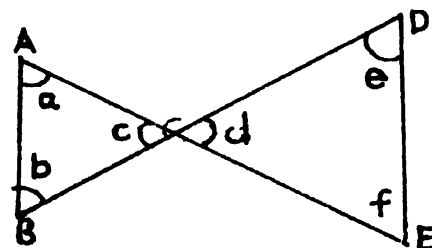
(C) If both the statements (1) and (2) are needed together to answer the question but neither statement alone is sufficient,

(D) If each statement by itself is sufficient to answer the question,

(E) If neither statement is sufficient as they do not have sufficient data to answer the question

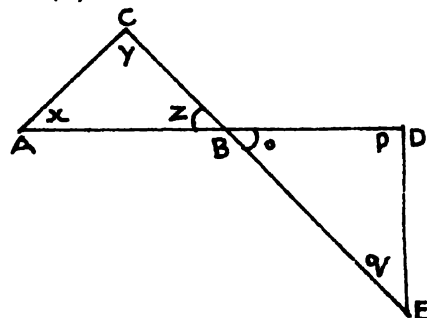
1 Find the value of angle a in the given diagram.

- (1) $a = b$
- (2) $a = 2$



2 In triangle ACB, find y if $AC = 10$ cm and $z = 40^\circ$

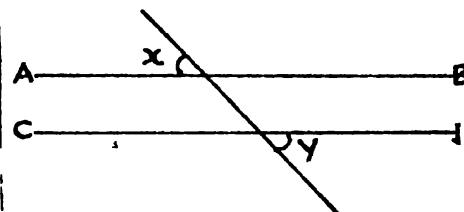
- (1) Angle $ACB = BDE$
- (2) $BC = 10$ cm



3 In an industry there are two parallel trade unions—one pro-management and the other anti-management—called A

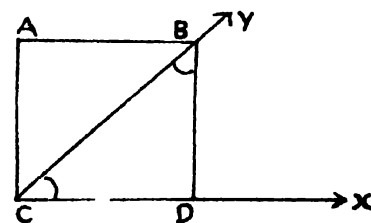
and B respectively. How many employees belong to union A?

- (1) Union B has 180 members
- (2) All members of union A are also members of union B
- 4 Are lines AB and CD parallel?
- (1) $y + x = 180^\circ$
- (2) $x = y$



5 Find angle CBD in the given diagram

- (1) Angles CBD BCD
- (2) Angles ACD BDC

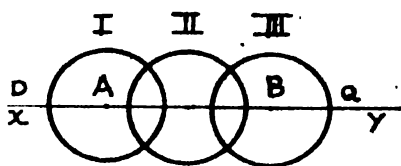


6 What is the average of w , x , y and z ?

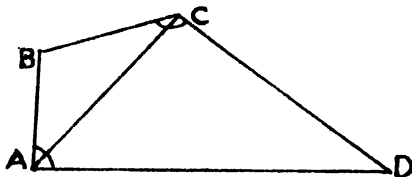
- (1) $3(w + x + y) = 63$ and $z = 3$
- (2) $w + x + y + 20 = z + 4$

7 The above figure has a given line xy containing the centres of three overlapping circles. What is the length of AB (A is the centre of circle I and B is the centre of circle III)

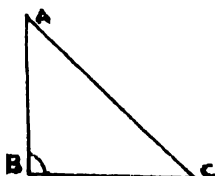
- (1) The length of the segment from P to Q is 80
- (2) The radii of circles, I, II and III are 20, 12 and 16 respectively



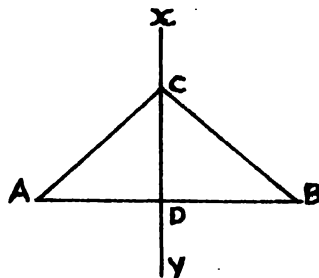
8. Which of the two companies A and B, has earned greater profit in 1985?
- Company A has earned a profit equal to 10% of its total profit for 1984
 - Company B has earned a profit equal to 5% of its total earnings of 1984
9. Is $A > B$?
- $(A+B)^2$ is positive
 - A is positive
10. A TV dealer sold three TV sets in a day. How much profit did he earn?
- Each TV set was sold for Rs 8,400
 - He received 10% commission on two sets and 20% commission on the third set
11. Is a positive?
- $a^2 - 1 = 0$
 - $a^3 + 1 = 0$
12. A class of 56 students (30% are boys and 70% girls) scored 90% marks in Economics. How many boys scored 90% marks?
- 10 girls scored 85% marks
 - 50% of the boys scored distinction in Economics
13. Is $AD = CD$ in the figure given here?
- $AB = BC$
 - $\angle BAD = \angle BCD$



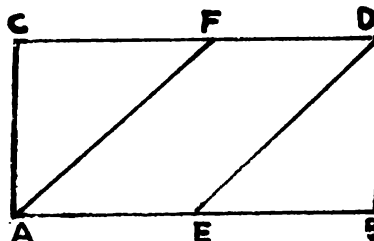
14. What is the strength of the school?
- If there are 210 girl students
 - 30% of them are boys
15. Find the perimeter of the triangle.
- The hypotenuse of the triangle is 10
 - Triangle ABC is a right-angled triangle



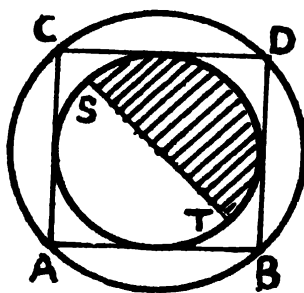
16. In the above figure, line xy bisects AB at D . Is y equidistant from A and B ?
- $CB = AC$
 - $DB = AD$



17. What is the average rate of motoring of two drivers?
- One drives at 8 km per hour
 - Second covers a distance of 100 km
18. What is the area of the parallelogram AFDE?
- ACDB is a rectangle with an area of 36 inches
 - $FD = DB$



19. Find the length of one side of the square ABCD.
- $CS = 3''$
 - The shaded portion is semicircle of $1/4$ area of the outer



20. In triangle ABC, what is the length of the side AC?
- $AB = 5''$
 - $BC = 6''$

JUMBLD WORDS SENTENCES

Directions: The following questions are based on jumbled spellings. Each letter in the jumbled word has been allotted a serial number according to the sequence in which it

appears in the alphabet. Of the two or more of the similar letters, only one has been numbered. Rearrange the jumbled letters to make meaningful words and find the correct answer choice given under each question.

21. N E I U B T R
4 2 3 7 1 6 5
(a) 1 7 4 2 6 5 3
(b) 6 5 7 2 1 4 3
(c) 6 5 3 1 7 4 2
(d) 5 4 2 1 3 6 5
22. D A J E I L
2 1 5 3 4 6
(a) 2 6 3 5 4 6
(b) 2 1 6 3 5 4
(c) 5 1 4 3 6 2
(d) 5 1 4 6 3 2
23. O M A G L O S R U
5 4 1 2 3 7 6 8
(a) 5 7 8 6 2 3 1 4 5
(b) 2 3 1 4 5 6 5 8 7
(c) 7 8 6 5 2 3 1 4 5
(d) 2 3 1 4 6 5 8 5 7
24. E H E I R N O
1 2 3 6 4 5
(a) 2 1 6 3 5 4 1
(b) 2 1 6 5 3 4 1
(c) 2 3 1 7 4 1 6 5
(d) 2 3 1 4 7 1 6 5
25. O A T M H M M
4 1 5 3 2
(a) 3 3 4 5 2 1 3
(b) 4 5 3 3 1 2 3
(c) 3 1 4 3 3 5 2
(d) 3 1 3 3 4 5 2
26. I N I E C D S O
4 5 3 1 2 7 5
(a) 2 3 1 4 7 6 5 1
(b) 2 3 1 4 7 6 1 5
(c) 2 3 1 7 4 1 6 5
(d) 2 3 1 4 7 4 6 5
27. A F T U S E R P S
1 3 7 8 6 2 5 4
(a) 1 3 7 1 5 6 2 6 4
(b) 6 8 4 2 5 3 1 6 7
(c) 6 8 4 2 3 5 1 6 7
(d) 6 8 4 2 3 5 1 7 6
28. I G N N A O S E R
4 3 5 1 6 8 2 7
(a) 7 2 1 8 6 5 5 3 4
(b) 7 2 1 8 6 5 4 5 3
(c) 7 2 1 8 6 5 5 4 3
(d) 7 1 2 8 6 5 4 5 3
29. A E U A G N L G
1 2 6 5 4 3
(a) 4 1 5 3 6 3 2 1
(b) 4 1 5 3 6 1 3 2
(c) 4 1 5 3 3 6 2 1
(d) 3 6 1 3 2 1 5 4
30. T T R R S P A O N
7 5 6 4 1 3 2
(a) 7 5 1 2 6 4 3 5 7
(b) 4 3 5 7 7 5 1 2 6
(c) 6 4 3 5 7 1 5 7 2
(d) 4 3 5 7 1 7 6 2 6

DISARRANGED SENTENCES

Directions: In the following questions, you will find disarranged sentences. After arranging the words in the proper order, indicate the sentence which makes sense by using the numbers given under the words:

Example: Man makes perfect a
1 2 3 4

practice

The correct answer in this example will be : 5 2 4 1 3

31. Never better is than it late

- 1 2 3 4 5 6
(a) 6 5 4 2 1 3
(b) 3 4 2 1 5 6
(c) 3 4 2 6 1 5
(d) 5 3 2 6 4 1

32. With with hunt hold the

- 1 2 3 4 5
the hounds to hare and
6 7 8 9 10
(a) 10 9 8 6 5 2 3 4 7
(b) 7 1 4 5 2 8 9 10 6 3
(c) 8 4 1 5 9 10 3 2 6 7
(d) 1 8 4 2 6 7 9 3 10 5

33. Breath blow cold hot the to

- 1 2 3 4 5 6
in same and
7 8 9
(a) 6 2 4 9 3 7 5 8 1
(b) 6 2 4 9 3 7 5 8 1
(c) 6 2 9 3 4 7 5 8 1
(d) 1 9 8 7 4 3 2 5 6

34. Grave the in foot have one's to

- 1 2 3 4 5 6 7
(a) 7 5 2 6 4 3 1
(b) 7 4 5 6 2 1 3
(c) 7 5 6 4 3 2 1
(d) 3 1 7 5 6 4 7

35. Hand into take to law the one's

- 1 2 3 4 5 6 7
(a) 2 5 6 1 3 4 7
(b) 4 3 5 6 2 7 1
(c) 7 3 6 2 5 1 4
(d) 4 3 6 5 2 7 1

36. A dilemma to the horns of be

- 1 2 3 4 5 6 7
on
8
(a) 8 6 4 2 1 5 3 7
(b) 3 2 6 4 5 1 8 7
(c) 1 2 3 4 5 6 7 8
(d) 3 6 2 8 1 4 5 7

37. Dog wake to a sleeping up

- 1 2 3 4 5 6
(a) 3 6 4 3 1 5
(b) 3 2 6 4 5 1
(c) 3 6 2 5 1 4
(d) 3 6 2 5 1 4

38. Water blood than thicker is

- 1 2 3 4 5
(a) 2 5 4 3 1
(b) 2 5 3 4 1
(c) 2 4 5 3 1
(d) 3 1 4 5 2

39. Stile help over the to a dcg

- 1 2 3 4 5 6 7
lame
8
(a) 5 2 6 7 4 3 1
(b) 5 2 7 6 3 4 1
(c) 5 2 6 7 3 4 1
(d) 1 4 3 7 6 2 5

40. Sea deep between the the

- 1 2 3 4 4
devil and
5 6
(a) 3 2 1 7 5 6 4
(b) 3 4 5 6 7 1 2
(c) 3 4 2 1 7 5 6
(d) 3 4 6 7 5 2 1

E.T.

ANSWERS

1. (E) Statements (1) and (2) together are not sufficient. $c=d$ (being verticle angles). $a+b+c=d+e+f$ because sum of a triangle is 180° . This means $a+b=e+f$. Based on the statements, we have $a+a=e+a$. So $e=a$.
2. (B) Statement (2) alone is sufficient, since $BC=10$ and $AC=10$. Therefore $BC=AC$ which implies $xz=40$. Since the sum of a triangle $=180$, $y=100$. Triangle BDE has nothing to do with the problem.
3. (E) By taking both the statements into account, we arrive at the answer that in union A there should be 180 members.
4. (B) By statement (2) $x=y$. Therefore their verticle angles are also equal which are alternate interior angles. Hence the lines are parallel.
5. (A) Statement (1) is sufficient because triangle has sum of 180° . Angle $BDC=90$ and $BCD=CBD$, i.e., 45 each. $180-90=90-45=45$.
6. (A) Average of four terms can be computed by making their total which is given in statement (1), i.e.,
 $3(w+x+y)=63$ and $z=3$
 $w+x+y=21$ and $z=3$
 $w+x+y+z=23$. Hence average is 6.
7. (C) From statement (2) the dia. of circles I and III are around 32 respectively. From statements (1) the length from PQ is 80. Hence the distance from circle I to II is $80-72$ or 8. To find length of AB, $20+8+16=44$.
8. (E) The base "amount" of profit is not expressed in any of the statements.
9. (E) Statement (1) tells us nothing about relative values of A+B except that (A+B) is

- positive. Statement (2) gives no additional information.
10. (C) Both statements together give us the answer.
11. (B) As per statement (1) a equals 1 or -1 so it does not give complete data. According to (2) a equals -1 so it by itself is sufficient to answer the question.
12. (E) Both the statements do not give us information to solve the problem.
13. (C) Both (1) and (2) are needed to solve the problem. If $\angle BAD$ and $\angle BCD$ are right angles, they are equal. $\angle BAC$ equals $\angle BCA$. Since they are base angles of an isosceles triangle. Subtracting equals from equals, $\angle DAC$ equals $\angle DCA$. Therefore ACD is an isosceles triangle and $AD=CD$.
14. (C) By statement (2) if 30% are boys, 70% left should be girls. From statement (1) let x be the number of students.
 $.70x=210$
 $70x=21,000$
 $x=3,000$
15. (E) From both statements together one side of the triangle is known. Hence perimeter cannot be determined from the data given.
16. (A) By statement (1) if $CB=AC$, then any point on a bisector is equidistant from the ends of the line segment.
17. (E) For computing average, we should know how many km are covered by each driver per hour.
18. (E) Let DB increase and CD decrease correspondingly. Area of AFDE can be changed without contradicting either statement. Hence (1) and (2) are not enough to solve the problem.
19. (A) In any case (2) is true. Since the proportions

remain constant, once CS is given, the side of the square can be computed as : $6/\sqrt{2-1}$

20. (E) Neither (1) or (2) give us sufficient information. Size of one angle should have been given in one of the statements

Jumbled words/Sentences

21. (c) TRIBUNE
23. (b) GLAMOROUS
25. (d) MAMMOTH
27. (b) SUPERFAST
29. (b) LANGUAGE
22. (d) JAILED
24. (b) HEROINE
26. (d) DECISION
28. (b) REASONING
30. (a) TRANSPORT

Disarranged sentences

31. (d) It is better late than never
32. (c) To hold with the hare and hunt with the hounds
33. (b) To blow hot and cold in the same breath
34. (c) To have one's foot in the grave
35. (d) To take the law into one's hand
36. (c) To be on the horns of a dilemma
37. (b) To wake up a sleeping dog
38. (a) Blood is thicker than water
39. (c) To help a lame dog over the stile
40. (d) Between the devil and the deep sea

BSRB (PO) Exam, Dec '84

GENERAL AWARENESS

Questions published in this section appeared in the General Awareness paper of the BSRB (PO) Exam, held on Dec 30, 1984. The questions are based on the candidates' memory as they are not permitted to take papers out of the exam hall. Though we have compiled these questions as close to the original as possible we take no responsibility for the discrepancies which may have crept in.

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the questions. Answers are given at the end of these tests.

- Which of the following is a water-borne disease?
(a) Malaria (b) Cholera
(c) Typhoid (d) None of the above
- Myopia is a disease of the
(a) Ear (b) Nose
(d) Heart (d) None of the above
- Dadra & Nagar Haveli are located in
(a) Maharashtra (b) Gujarat
(c) Karnataka (d) Kerala
(e) None of the above
- X Asiad will be held in
(a) Bangkok (b) Brisbane
(c) Seoul (d) None of the above
- Which of the following is both drama and dance?
(a) Bharata (b) Odissi
Natyam
(c) Kathakali (d) None of the above
- North-South dialogue refers to the talks between
(a) The countries of North and South America
(b) The developed countries and the Third World
(c) The countries of Europe and Africa
(d) North and South Korea
(e) None of the above
- The Prime Minister of India should not be less than — of age.
(a) 30 years (b) 35 years
(c) 25 years (d) 40 years
(e) None of the above
- Which of the following is known as the 'Evening Star'?
(a) Saturn (b) Mars

- (c) Venus (d) Mercury
(e) None of the above
- Arya Samaj was founded by
(a) Dayanand (b) Swami
Saraswati Vivekanand
(c) Raja Ram (d) Ram Krishna
Mohan Roy Paramhansa
(e) None of the above
- Which Indian state has two capitals?
(a) MP (b) Himachal Pradesh
(c) J & K (d) None of the above
- Which of the following is the function of iron in the human body?
(a) It makes our bones sturdy
(b) It helps in the clotting of blood
(c) As red blood cells die, iron with the help of copper converts itself into haemoglobin
(d) None of the above
- The smallest continent of the world in terms of territory is
(a) North America (b) Europe
(c) Australia (d) None of the above
- Magsaysay Awards have been instituted to perpetuate the memory of the President of
(a) New Zealand (b) Mauritius
(c) The Philippines (d) Malaysia
(e) None of the above
- Mixed economy means (the)
(a) Coexistence of the private and the public sector
(b) Least taxation by the government on the private sector
(c) Extensive exports by the public sector undertakings
(d) None of the above

- Caspian Sea lies between
(a) USSR and Turkey (b) USA and Canada
(c) USSR and Iran (d) None of the above
- The biggest producer of apples in India is
(a) J & K (b) Karnataka
(c) Himachal Pradesh (d) None of the above
- Which of the following is the oldest dynasty?
(a) Maurya (b) Chola
(c) Chalukya (d) Nanda
(e) None of the above
- The capital of Gujarat is
(a) Surat (b) Baroda
(c) Ahmedabad (d) Gandhinagar
(e) None of the above
- Which of the following is found in abundant measure in India?
(a) Uranium (b) Thorium
(c) Tungsten (d) None of the above
- Which country is known as the 'Land of the Midnight Sun'?
(a) Sweden (b) Netherlands
(c) Iceland (d) Japan
(e) None of the above
- The language spoken by the largest number of people is
(a) English (b) French
(c) Chinese (d) Arabic
(e) None of the above
- When Vasco da Gama reached India in 1498 the ruler of India was:
(a) Babar (b) Ibrahim Lodhi
(c) Chandragupta Maurya (d) None of the above
- The 45th Constitutional Amendment extends the provision of reservation in government jobs for SCs and STs by
(a) 10 years (b) 15 years
(c) 30 years (d) 40 years
(e) None of the above
- Citius, Altius, Fortius is the motto of
(a) Asian Games (b) Commonwealth Games
(c) Olympic Games (d) None of the above
- The Indian Institute of Forest Management is located in
(a) Nainital (b) Simla
(c) Dehra dun (d) None of the above
- Magnot Line lies between

- (a) USSR and Poland
(b) France and West Germany
(c) USA and Canada
(d) North Korea and South Korea
(e) None of the above
27. Maximum cashewnut is grown in which of the following states?
(a) Kerala (b) Tamil Nadu
(c) Gujarat (d) Karnataka
(e) None of the above
28. New Zealand lies to the — of Australia.
(a) North-west (b) South-east
(c) North-east (d) None of the above
29. Which film received the UNESCO Solidarity Award for 1984?
(a) *Arth* (b) *Mrigya*
(c) *Ardh Satya* (d) *Paar*
(e) None of the above
30. The largest wool producing country in the world is
(a) Australia (b) USSR
(c) USA (d) South Korea
31. When cream is removed from milk the density of milk
(a) Increases (b) Decreases
(c) Remains the same (d) None of the above
32. P.T. Usha is associated with
(a) 400 m hurdles (b) 800 m
(c) 3,000 m (d) None of the above
33. With which of the following rivers is Silent Valley associated?
(a) Cauveri (b) Krishna
(c) South Periyar (d) None of the above
34. The Sarnath Lion Capital of Ashoka, the State Emblem of India, is kept at (the)
(a) National Museum
(b) Sarnath Museum
(c) Archaeological Survey of India
(d) None of the above
35. Which of the following is an international air carrier?
(a) Vayudoot (b) Indian Airlines
(c) Air India (d) None of the above
36. Which bank, before the creation of

AUTHORS NOTE

Here is the author's reply to the readers' queries on the *Mathematical Ability* section of Practice Tests on *How To Tackle CAT-I* (Sep '85).

Q.9 should have read as, "which of the following equations does not have a solution in rational number." In the fifth line of solution to Q. 19, it should be $3/6x$ instead of $2/6x$.

In Q.23, the correct expression is $3\sqrt{-1}$

and in Q.27, there should be a comma instead of a dot between 0 and 3 in the expression 0.3 and $5----$. The correct answer to Q.30 is 2256.

- the RBI in 1935, was functioning as the central bank of the country?
(a) Indian Bank (b) Imperial Bank
(c) Bank of Baroda (d) Punjab National Bank
37. The Meghdoot Award is given for outstanding services in
(a) AIR (b) Literature
(c) Journalism (d) Posts and Telegraphs
38. We use diamond, as an ornament because
(a) It has a high refractory index
(b) It reflects light more than any other metal
(c) It is the purest form of carbon
(d) None of the above
39. Panna Lal Ghosh is associated with
(a) Tabla (b) Sarod
(c) Shehnai (d) None of the above
40. Which of the following groups of languages is written vertically?
(a) Greek, Latin, Spanish
(b) Chinese, Japanese, Khimer
(c) Uzbek, Chinese, Pakhto
(d) None of the above
41. Which of the following programmes has been launched with a view to raising the poorest families in the rural areas above the poverty line?
(a) Integrated Rural Development Programme
(b) Training Rural Youth for Self-Employment
(c) Command Area Development Authority
(d) None of the above
42. Brain drain refers to
(a) Migration of talent to an alien country
(b) Widespread illiteracy

- (c) Use of science and technology for destructive ends
(d) None of the above
43. Davis Cup is associated with
(a) Hockey (b) Football
(c) Lawn tennis (d) Badminton
44. Who is popularly known as the 'Nightingale of India'?
(a) Lata Mangeshkar (b) Sarojini Naidu
(c) Florence Nightingale (d) Asha Bhonsle
45. The newspaper *People's Daily* is published from
(a) China (b) New York
(c) Pakistan (d) South Korea
46. The Five Rathas Temples in Mahabalipuram were built by the
(a) Chola rulers (b) Chalukya rulers
(c) Pallava rulers (d) Chandella rulers
- (e) Maurya rulers
47. Who received the Nobel Prize for Literature for 1984?
(a) William Golding (b) Jaroslav Seifert
(c) Richard Stone (d) Bruce Merrifield
48. Who was the first Vice President of India?
(a) S. Radhakrishnan (b) V.V. Giri
(c) Zakir Hussain (d) Rajendra Prasad
49. The Garba has its origins in
(a) Maharashtra (b) Gujarat
(c) MP (d) UP

Compiled by ADHIR KUMAR JAIN,
UMESH SINGH & D. C. GUPTA
Restructured by SUPRIYA

English

BY THE AARBEEES

FOR NDA, SBI POs, SSC CLERKS GDE...

The following questions have been formulated for those appearing in the forthcoming NDA, SBI POs and SSC(Clerk's Grade) Exams.

DIRECTIONS: Tick mark the choice that best answers each question. Answers with explanations appear at the end of this test.

READING COMPREHENSION

1 Read the following passage and answer the questions that follow:

The other day my mother, who is still actively in practice as a gynaecologist, asked me how a patient of hers could be helped to do something about her old Mum who used to go dotty in the afternoons and upset everyone in the house. Similarly, three

or four times each year my telephone rings and somebody wants advice about help with an elderly relative who is becoming too great a load on the modern household. Too great a load not necessarily because of lack of will to help or sympathy, but because houses and flats are too small, everyone quite reasonably goes out to work, and domestic help is non-

existent. In Scandinavia they do these things much better by having day and night clinics attached to housing estates.

These requests for help and information brought home to me the fact that I really knew very little about this aspect of the social services, both in terms of what is available physically and what facilities exist to give financial support to those who genuinely need it. Through a relatively new and remarkably sensible organisation called the Elderly Invalids' Fund, I was able to find out a great deal more about the problem and one kind of solution.

Mrs Y is aged eighty-six and until recently was able to do a little work as an office cleaner. She had outlived all her close relatives but had a room in the house of her sister-in-law, who apparently disliked her intensely. In addition the son of the house, a person of low IQ and distressing behaviour, used to terrorise the poor lady so much that she stayed out of doors all day just to be out of the way. Another of her difficulties was that 'they' would not let her use the nearby lavatory, but made her go to the one outside. All this in spite of the fact that she paid rent.

Mrs Y had one friend who worked in the office she cleaned. This friend had her for occasional weekends and holidays and she was invited for Christmas 1963. So fearful was she of going home and so kind was the friend that she stayed ten months. Her visit was terminated by a very severe attack of pneumonia which took her to the hospital.

Her pneumonia was complicated by a senous vein thrombosis, but when she got over this she, as we say in medical circles, 'turned her face to the wall' and lost all interest in life. The ward sister, who is a cheerful genius, suddenly realised while trying to get her to eat some lunch one day, what the trouble was. "If I promise you that you will never go back to that place" sister said, "will you get better, Mrs Y?" She immediately sat up and ate two helpings of pudding. From that moment she never looked back and when I saw her in the ward three days before she went off to a residential home in Hertfordshire, called Walnut Tree House, she told me proudly how she had been out shopping all by herself and how much she was looking forward to her new life.

The kind and knowledgeable Almoner, who took me to meet Mrs Y and the ward sister, said that the home, which would cost seven-and-half guineas a week, was being paid for by her old age pension, the Assistance

Board and the Elderly Invalids' Fund. This meant that she would also have quite enough money for clothes and outings.

- This article has been written by
 - a social reformer
 - a doctor
 - an elderly invalid
 - a young lay man
- The most likely meaning of the phrase 'to go dotty' could be
 - to become slightly mad
 - to feel a bit sleepy
 - to sink into unconsciousness
 - to start using abusive language
- The author regards the neglect of the old as something
 - not to worry about
 - caused by lack of feeling
 - of censure against social services
 - directly connected with the situation of the modern household
- The most appropriate description of Mrs Y's plight at her sister-in-law's can be expressed by the word
 - pathetic
 - cruel
 - inconsiderate
 - desperate
- After she had got over her pneumonia and vein thrombosis, Mrs Y. needed
 - friendly attention
 - sympathetic attitude
 - psychological treatment
 - good things to eat
- The best heading for the above passage is
 - psychology of the old
 - looking after old people
 - need for more social services
 - the old and their diseases

PRECIS WRITING

II Write a precis of the following passage:

If there is one fact more than any other which stands out in the history of science, it is the remarkable extent to which great discoveries and youthful genius stand associated together. Scores of instances can be quoted in support of this proposition. Indeed, if one were to attempt to write a treatise on any branch of science in which all discoveries made by youthful workers were left out, there would be very little left to write about. The fact of the matter appears to be that, other things being the same, the principal requisite for success in scientific research is not the maturity of knowledge associated with age and experience, but the freshness of outlook which is the natural attribute of youth. The conservatism which develops with increasing age is thus revealed as a factor which militates against great achievement in science. The great ideas seem to come most easily to youthful minds. Since,

however, much time is required to work out a new idea properly and fully, age and experience are not altogether useless in science. Up to a certain point, the conservatism bred by age may even be useful as a brake on the wilder flights of youthful imagination. Further even the elderly may, if they so choose, retain and cherish a youthful spirit and outlook. So long, therefore, as they do not allow the conservatism of age to function as a suppressor of youthful genius, the elderly may continue to find themselves useful as guides and inspirers of research. On this view, indeed, the principal function of the older generation of scientific men is to discover talent and genius of the younger generation and to provide ample opportunities for its free expression and expansion.

SYNONYMS

III Choose the best alternative.

- PORNOGRAPHY
 - pencil drawings and sketches
 - description of sexual and erotic feelings
 - X-ray photography of the brain
 - writing in an ancient script
- REPRIEVE
 - postpone execution
 - grant pardon
 - make a petition
 - recover lost ground
- SCARE
 - strike hard
 - conceal
 - see clearly
 - frighten
- FEMUR
 - brain fever
 - sweet water fish
 - thigh-bone
 - baby talk
- NUMISMATIC
 - of coins
 - wandering
 - primitive
 - experimental

ANTONYMS

IV Choose the best alternative:

- PERILOUS
 - easy
 - comfortable
 - safe
 - peaceful
- CROOKED
 - chaste
 - unbending
 - straight
 - pious
- PLENITUDE
 - incompleteness
 - resilience
 - disturbance
 - necessity
- ILLICIT

- (a) liberal
(b) intelligent
(c) lawful
(d) religious
5. SENILE
(a) sensible
(b) youthful
(c) intelligent
(d) bright

IDIOMS

V Choose the best answer:

1. A pig-headed person is one who is
(a) foolish
(b) cowardly
(c) obstinate
(d) dull
2. To be woolgathering means to be
(a) absent-minded
(b) thoughtless

- (c) sleepy
(d) busy
3. Leaving the gate unlocked was a hare-brained thing to do. Here hare-brained means
(a) brave
(b) mischievous
(c) foolish
(d) irrational
4. Hide-bound parents are those who are
(a) home-sick
(b) too conventional
(c) pretentious
(d) insincere
5. To get something off one's chest is to
(a) discuss a worry
(b) make a declaration
(c) disclose
(d) cough loudly

SPOTTING ERRORS

VI Spot the errors if any:

1. He said that it needed several porters to carry all his luggages. **No error**
2. It is a general opinion that that girl is very high for her age. **No error**
3. In his younger days he was used to do a good deal of baby-sitting on weekends. **No error**
4. No sooner had we set out when a thunder storm occurred and the whole countryside lit up. **No error**
5. Even when pressed hard she denied to say where she had hidden the ring. **No error**

ANSWERS

BSRB PO Exam, Dec 1984

- (b)
2. (d) Myopia is a disease that affects the eyes. A person suffering from this disease cannot see distant objects.
3. (d) They are located in Gujarat but are a Union Territory.
4. (c) The X Asiad will be held in Seoul, South Korea (official name Republic of Korea) in September-October 1986.
5. (c)
6. (b) Talks between the North and South are also referred to as talks between developed and under developed countries.
7. (c) An Indian citizen of 25 years and above can contest Lok Sabha elections. By established convention the Prime Minister should be a member of the Lok Sabha.
8. (c)
9. (a) Arya Samaj was established on Apr 10, 1875 in Bombay by Swami Dayanand Saraswati (1824-1883)
10. (c) Srinagar is the summer capital while Jammu is the winter capital of J & K.
11. (c)
12. (c) Australia's area: 2,974,581 sq km; Europe's area: 3,754,000 sq km; North American's area: 8,440,000 sq km.
13. (c) 14. (a) 15. (c) 16. (c)
17. (d) The Nanda Dynasty was founded in 362 B.C., the Maurya dynasty in 323 B.C. and the Chola Dynasty in 1st century A.D.
18. (d) 19. (b) 20. (a)
21. (c) About 700m people speak Chinese.
22. (d) Sikander Lodhi (1489-1517) ruled India when Vasco-da-Gama reached India.
23. (a) From January 1980 to January 1990.
24. (c) These are Latin words coined by Father Didon, a French educationist in 1895. In English it means swifter, higher and stronger.
25. (c)
26. (b) Zone of French fortification which was created by France on the Franco-German border before World War II. It is named after the French Minister of War, Andre Maginot (1877-1932).
27. (a) 28. (b) 29. (d) 30. (a) 31. (b) 32. (a)
33. (d) The initial plan was to construct a 120 Mw hydro-electric project on the Kuntipuzha river in the silent Valley on the slopes of Western Ghats in the Palghat

district of Kerala. The plan, however, was shelved.

34. (b)
35. (c) Indian Airlines operates in India and in neighbouring countries like Sri Lanka, Pakistan, Nepal, Burma, Afghanistan and Maldives Islands. Vayudoot operates in the country linking up small cities with big ones.
36. (b) 37. (d) 38. (d)
39. (d) Late Panna Lal Ghosh was a leading flute player of the country.
40. (b) 41. (a) 42. (a) 43. (c) 44. (b) 45. (a)
46. (c) Pallavas ruled from 600 A.D. to 850 A.D. in South India.
47. (b)
48. (a) Radhakrishnan was Vice-President from 1952-62; Zakir Hussain from 1962-67; and V.V. Giri from 1967-69
49. (b)

English

I 1(b); 2(a); 3(d); 4(a); 5(c); 6(b).

II The most significant thing in the history of science is the close connection between talented youth and great discoveries. There is plenty to prove that successful scientific research needs fresh ideas which the young have rather than the ripe experience that the old have. This is because age breeds conservatism which is an enemy of new ideas. Of course it is possible to be old in age but young in spirits. Not only that, old scientists uncorrupted by conservatism can discover and encourage youthful talent and thus contribute to scientific research.

III 1(b); 2(a); 3(d); 4(c); 5(a)

IV 1(c); 2(c); 3(a); 4(c); 5(b)

V 1(c); 2(a); 3(c); 4(b); 5(a)

VI 1(d); 2(c); 3(b); 4(b); 5(c)

THE HUMAN MACHINE

There are 45 miles of nerves in the skin of a human being. An average human scalp has 1,00,000 strands of hair. It takes 17 muscles to smile and 43 muscles to frown. The muscle of the human jaw exerts a force of over 220 kg. The average person consumes about one tonne of food and drink every year. The skin of the adult human body weighs about six pounds. To get rid of 1 lb of fat, you would have to walk 34 miles. Walking fast uses eight times as many calories as walking. Two-third of the body's weight is water.

Rajeev Sethi

Quantitative Aptitude

BY KAVITA KAPOOR & B.L. ARORA

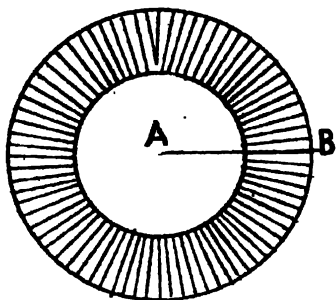
FOR NDA, SBI (POs), SSC CLERKS' GDE EXAMS...

The following questions have been formulated for those appearing in the forthcoming NDA, SBI (POs) and SSC (Clerks' Grade) exams.

DIRECTIONS: Tick mark the choice that best answers each question. Answers with explanations appear at the end of this test.

1. $\left(\frac{1}{25}\right)^{-\frac{3}{2}}$ is equal to
(a) $\frac{1}{125}$ (b) $25\sqrt{5}$
(c) $\frac{1}{25\sqrt{5}}$ (d) 125
2. $6\sqrt{27x^3} + 3\sqrt{-27x^3}$ is equal to
(a) $3\sqrt{27x^3}$ (b) $3\sqrt{-27x^3}$
(c) $3\sqrt{3x-3x}$ (d) $(3x)^3 + \sqrt{-3x}$
3. $\frac{1}{1+1}$ is equal to
(a) $\frac{1}{2}$ (b) $\frac{1}{2}$
(c) $\frac{1}{2}$ (d) $\frac{1}{2}$
4. 25 is ——— % of $166\frac{2}{3}$
(a) 12.5 (b) 15
(c) 18 (d) $20\frac{2}{3}$
5. $27^{-\frac{2}{3}} + 256^{\frac{3}{4}}$ is equal to nearly
(a) 9.15 (b) 192.72
(c) 64.11 (d) 88.86
6. $0.9 \times 0.0066 \times 0.096$ is equal to
(a) 72 (b) 7.2
(c) 0.072 (d) 0.72
7. The value of 93^2 is equal to
(a) 8649 (b) 8469
(c) 8869 (d) 8249
8. If $a^2 + b^2 = ab$, the value of $\frac{a}{b}$ (—) is equal to
(a) 28 (b) 12
(c) 76 (d) 92
9. The value of the expression $28 - (12) - (-3) \div 6 + (-4)$ is equal to
(a) 46 (b) 22
(c) 16 (d) 10
10. The average measure of the angles of a triangle is
(a) Maximum for a right angled triangle
(b) Maximum for an obtuse angled triangle
(c) Minimum for an acute angled triangle
(d) Same for all the triangles
11. A triangle having its angles in the ratio ——— cannot be a right angled triangle.
(a) 1:1:2 (b) 1:2:3
(c) 2:4:6 (d) 1:3:6
(e) Any of the above.
12. The number 17065423968 is divisible by
(a) 4 (b) 6
(c) 8 (d) 16
(e) All of the above
13. The average age of the four members of a family is 19 years. After 2 years, their average age will increase by nearly
(a) 8% (b) 10.5%
(c) 11.2% (d) 12.8%
14. The average measure of the sides of a rectangle is 7 cm. If the area of the rectangle is 40 cm², the difference between its length and breadth is
(a) 4 cm (b) 5 cm
(c) 6 cm (d) 7 cm
15. Consider the fractions $\frac{3}{4}, \frac{5}{6}, \frac{7}{8}, \frac{9}{10}$. The difference between the sums of the two largest and two smallest fractions is
(a) $\frac{1}{2}$ (b) $\frac{1}{4}$
(c) $\frac{1}{8}$ (d) $\frac{1}{16}$
16. The difference between simple interest and compound interest for 2 years at 10% per annum will be Rs 35 on a sum of
(a) Rs 350 (b) Rs 1,400
(c) Rs 2,700 (d) Rs 3,500
17. A given sum doubles at compound interest in five years. After another two and a half years, the amount will become nearly ——— times the given sum
(a) 3 (b) 2.84
(c) 4 (d) 2.42
18. A man deposits Rs 20,000 in a fixed deposit in a private company at 15% simple interest, while his friend deposits it in a post office account at 12% compound interest for three years. If the company deducts 10% income tax on the interest, who gets more and how much?
(a) Man, Rs 376.50
(b) Man, Rs 736.50
(c) Friend, Rs 524
(d) Friend, Rs 245
19. A number of friends decided to go on a picnic and planned to spend Rs 96 on eatables. Four of them, however, did not turn up. As a consequence the remaining ones had to contribute Rs 4 each extra. The number of them who attended the picnic was
(a) 24 (b) 16
(c) 12 (d) 8
20. If I walk to school at 3 km/hr, I reach 10 minutes earlier than when I walk at 2 km/hr. The distance of the school from my house is
(a) 0.5 km (b) 1 km
(c) 1.5 km (d) 2 km
21. An alloy contains 430 gms of copper, 80 gms of zinc and 50 gms of lead. The percentage of zinc in the alloy is nearly
(a) 19.27 (b) 16.36
(c) 14.28 (d) 12.16
22. A dealer wants to earn a profit of 20% on an item after offering a discount of 10% on the list price. He should list the article at ——— % of the cost price.
(a) 136.25 (b) 133.33
(c) 132.00 (d) 127.75
23. A ball bounces upto 2.5 m on the first bounce. If its bounce reduces by 20% on every successive bounce, at the fourth bounce, it will rise to a height of —
(a) 1 m (b) 1.05 m
(c) 1.12 m (d) 1.2 m
24. If $PV^{1/4} = 16$, $PV^{3/4}$ will be
(a) 256 (b) 36/P
(c) 256/P (d) 36/P
25. A profit of 24% on the cost price of an article is equal to a profit of ——— on the selling price.
(a) 27.6% (b) 23.8%
(c) 21.4% (d) 19.3%
26. A sewing machine dealer offers a sewing machine listed at Rs 750 at a cash discount of 10% or at 20% down payment and the balance in six monthly instalments of Rs 100 each. By accepting the instalments payment scheme, he is paying an interest of nearly ——— % per annum.
(a) 64 (b) 43

- (c) 33 (d) 24
27. If two successive discounts of 10% and $x\%$ are equivalent to a single discount of 23.5%, the value of x is
 (a) 12.5 (b) 13.5
 (c) 15 (d) 16.5
28. If AB is equal to R and the shaded area is equal to A, the radius of the inner circle is equal to
 (a) $R - A/\pi$ (b) $R^2 - A/\pi$
 (c) $(R - A/\pi)^2$
 (d) None of these

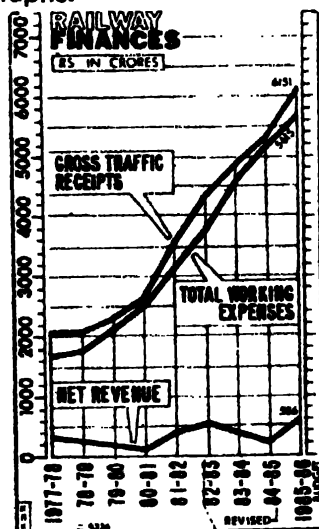


29. If the price of a radio set including 7% sales tax and Rs 15 licence fee is Rs 496.50, the amount of sales tax is
 (a) Rs 35.50 (b) Rs 33.25
 (c) Rs 31.50 (d) Rs 28.70
- Table A gives the comparative progress in drinking water supply of Kerala during the periods 1956-1982 and 1982-85. Answer questions 30-33 after carefully studying the table
30. The average number of problem villages per year increased during the second interval by nearly
 (a) 6% (b) 9%
 (c) 540% (d) 900%
31. The total financial assistance obtained from various sources in the second span was more than in the first span by
 (a) 476.36 lakhs
 (b) 467.36 lakhs
 (c) 368 lakhs
 (d) 297.26 lakhs
32. The number of tube wells drilled for non-Harijans during 1982-85 was _____% of the total number of tube wells drilled.
 (a) 34% (b) 56.8%
 (c) 65.8% (d) 68.6%
33. The average money spent per person per year during 1956-85 (assume all the money is obtained only from various sources given) is nearly
 (a) Rs 76 (b) Rs 97

TABLE A
Comparative Progress At A Glance

	During 25 years (1956-'82 May)	During 3 years (1982 June-'85 May)
No. of problem villages covered	557	591
No. of people covered : Rural	42 lakhs	58 lakhs
Urban	29.99 lakhs	3.71 lakhs
No. of tube-wells drilled	113	3,800
Tube-wells drilled exclusively for Harijans/Girijans	—	1,300
Percentage of people covered	28.28% (of total population)	28%
Harijan/Girijan schemes completed	222	353
Financial assistance obtained from Central Government	Rs 1,657.70 lakhs	Rs 3,695.35 lakhs
LIC	Rs 3,334.58 lakhs	Rs 1,370.05 lakhs
Foreign governments		Rs 295.24 lakhs

- (c) Rs 214 (d) Rs 752
- The railway finances during the year 1977-78 to 1984-85 are shown in the graphs in the figure. Answer questions 34-36 with reference to these graphs.



34. The difference between gross traffic receipts and total working expenses was minimum during the year
 (a) 1979-80 (b) 1980-81
 (c) 1983-84 (d) 1984-85
35. During 1982-83, the net revenue was nearly _____% of the gross traffic receipts
 (a) 8 (b) 10
 (c) 11.5 (d) 12.5
36. From 1977-78 to 1980-81, the total working expenses increased by nearly
 (a) Rs 400 crore
 (b) Rs 600 crore
 (c) Rs 720 crore
 (d) Rs 800 crore
37. The marks obtained by Rakesh in Physics and Chemistry are in the ratio of 4:3 whereas the marks obtained by him in Physics and Mathematics are in the ratio 5:6. If he obtains 60 marks in Chemistry, his score in Mathematics is
 (a) 88 (b) 92
 (c) 96 (d) 98
38. The ratio between the numerator and denominator of a number is 3:7. If the difference between the denominator and numerator is 12, their sum will be
 (a) 10 (b) 22
 (c) 26 (d) 30
39. If Aug 15, 1947 was a Friday, Aug 15, 1997 would fall on a
 (a) Friday (b) Sunday
 (c) Wednesday (d) Monday
40. If May 5, 1969 was a Monday, the next time May 5 was a Monday was in the year
 (a) 1974 (b) 1975
 (c) 1976 (d) 1977
41. Which of the following is not well defined?
 (a) n^0 (b) o/n
 (c) oxn (d) n/o
42. A bag contains Rs 58,000 in the form of Rs 10, Rs 20 and Rs 100. notes in the ratio 2:3:5. The number of Rs 20 notes in the bag is
 (a) 200 (b) 300
 (c) 400 (d) 800
43. After spending 80% of his salary, a man saves Rs 250. If his expenditure becomes 85% of his salary, his saving would reduce to
 (a) Rs 200 (b) Rs 187.50
 (c) Rs 162.50 (d) Rs 150

ANSWERS

1. (d) The given expression is $\left[\left(\frac{1}{25}\right)^{\frac{1}{2}}\right]^{-3} = \left(\frac{1}{5}\right)^{-3} = 5^3 = 125$
2. (c) $3\sqrt{27x^3} = 3x$. Thus the given expression is equal to $3\sqrt{3x} + (-3x)$
3. (b) Starting from bottom, the given expression becomes $\frac{1}{1+1} = \frac{1}{1+\frac{1}{2}} = \frac{2}{3} = \frac{7}{12}$
4. (b) Let $25 = \frac{x}{100}$ of $\frac{500}{3}$
Thus $x = 15$.
5. (c) $\left[(27)^{\frac{1}{3}}\right]^{-2} + \left[(256)^{\frac{1}{4}}\right]^3 = \frac{1}{9} + 64 = 64\frac{1}{9}$
6. (a) The total number of digits after the decimal is eight in both numerator and denominator. The decimals and zeros immediately following these may, thus, be omitted.
7. (a) $93^2 - 7^2 = (93+7)(93-7) = 8600$
 $\therefore 93^2 = 8649$
8. (c) $6^2 \cdot (-4)$ is equal to $6^3 + 4^3 - (6)(-4) = 36 + 16 + 24 = 76$
9. (a) The given expression becomes $28 + 36 \div 6 + 12 = 28 + 6 + 12 = 46$
10. (d) The average measure is 60° for all triangles.
11. (d) The angles in this case will be $18^\circ, 54^\circ, 108^\circ$. In all other cases, one of the angles is 90° .
12. (e) The last two digits (68) are divisible by 4, the last three by 8 and the last, four by 16, so the number is also divisible by these. Since the sum of the digits is divisible by 3, the number is divisible by 6 ($= 2 \times 3$) also.
13. (b) % increase = $\frac{\text{Increase}}{\text{Total age}} \times 100 = \frac{8}{76} \times 100 = 10.5\%$
14. (c) Average side = $\frac{1+b}{2} = 7 \therefore 1+b=14$ —(i)
Hence $(1-b)^2 = (1+b)^2 - 41$ $b = 196 - 160 = 36 \therefore 1-b = 6$ (ii)
Adding (i) & (ii), $1 = 10$ and thus $b = 4$.
Thus $1-b = 10-6 = 4$ cm.
15. (b) $\left(-\frac{8}{9} + \frac{11}{12}\right) - \left(\frac{3}{4} + \frac{5}{6}\right) = \frac{65}{36} - \frac{19}{12} = \frac{8}{36} = \frac{2}{9}$
16. (d) On Rs 100, the difference is (Rs 121—Rs 120) = Re 1. Therefore, the difference will be Rs 35 on Rs 3,500.
17. (b) Since amount = Principal $\left(1 + \frac{R}{100}\right)^t$
 $2P = P\left(1 + \frac{R}{100}\right)^5$
Thus, $\left(1 + \frac{R}{100}\right)^5 = 2$ or $\left(1 + \frac{R}{100}\right)^{2.5} = \sqrt{2}$
 $A = P\left(1 + \frac{R}{100}\right)^{7.5} = \sqrt{2}(2P) = 2.84 P$
18. (a) Interest earned by man = $20,000 \times \frac{15}{100} \times 3 = 9,000$
- Net interest payable to him after deduction of income tax = $9,000 - 900 = \text{Rs } 8,100$.
Interest payable to his friend = $2,500 + 2,812.50 + 3,164 = \text{Rs } 8,476.50$
19. (d) Let x be the number who decided to go on the picnic. Then $4(96/x) = 4(x-4)$, where the left hand side is the contribution of the four who did not go, and the RHS, the money which the remaining ones had to pay. Solving, we get $x = 12$. Thus, eight of them attended the picnic.
20. (b) If x is the distance in km $x/3 + 1/6 = x/2$ or $x = 1$ km
21. (c) The required percentage is $\frac{14.28}{100} \times 100 = 14.28\%$.
22. (b) If the CP is Rs 100, list price ($L - 10\%$ of L) = 120 or $0.9L = 120$ Thus $L = \text{Rs } 133.33$.
23. (b) The height decreases by $\frac{1}{3}$ of the height on every bounce.
24. (c) $V^{1.4} = 16/P$. $\therefore V^{3.8} = 256/P^2$
Hence $PV^{3.8} = P \cdot 256/P^2 = 256P$
25. (d) The required profit is $24/124 \times 100 = 19.3\%$
26. (b) Cash Price paid = Rs (750—75) = Rs 675.
II Scheme: Down Payment = Rs 150, Monthly product of instalments = $100 + 200 + \dots + 600 = \text{Rs } 2,100$ Interest paid = Rs 75
 \therefore Rate of interest = $\frac{75 \times 100 \times 12}{2,100 \times 1} = 43\%$
27. (c) If S.P. = 100, two successive discounts bring the price to $90 - \frac{90x}{100} = 90 - 0.9x = 76.5$. $\therefore x = 15$.
28. (b) Area of the shaded portion = $\pi R^2 - \pi r^2 = A$. $\therefore \pi R^2 = \pi r^2 + A$ Or $r = \sqrt{R^2 - A/\pi}$ where r is the radius of the inner circle.
29. (c) Sales tax = $\frac{1}{100} \times 481.50 = \text{Rs } 31.50$
30. (d) Average number increased from $\frac{541}{2} = 22.3$ to $\frac{541}{2} = 197$ an increase of nearly 900%
31. (c) The difference is (5,360—4,992) lakh = 368 lakh
32. (c) Required percentage = $2,500/3,800 \times 100 = 65.8\%$
33. (a) The difference is equal to the net revenue which is minimum during 1980-81.
35. (c) Required percentage = $\frac{11.5}{100} \times 100 = 11.5\%$
36. (d) The total working expenses increased from Rs 1,700 crore to Rs 2,500 crore.
37. (c) His marks in Physics = $\frac{1}{3} \times 60 = 80$ and in Mathematics = $\frac{2}{3} \times 80 = 96$
38. (d) $D - N = 12$, $D/N = \frac{1}{3}$
 $\therefore 7N/3 - N = 12$, which means $N = 9$ and hence $D = 21$.
39. (a) There are 50 years between 47 and 97, 13 of these being leap years. The difference in days between the two given dates = $(50 + 13) \times 7 = 497$ days = 71 weeks.
40. (b) Days advance by one day in a non-leap year and two days in a leap year.
41. (d) Division by zero is not well defined.
42. (b) Let the 10, 20 and 100 rupee notes be $2x$, $3x$ and $5x$ respectively.
Then $20x + 60x + 500x = \text{Rs } 58,000$ or $x = 100$
43. (b) 20% of salary = Rs 250. Thus, salary = Rs 1,250
New saving = 15% of 1,250 = Rs 187.50

MASTERING THE VOID

...with the help of man's unfathomable ingenuity. Masterful artistry and a scientific temper, a craving for the unknown have all gone into the making of man's pride in space—the satellites.

BY DR SHIV PRASAD KOSTA

Director, Publications & Public Relations Unit, ISRO

An artificial satellite is a man-made object which is launched into space by rockets to revolve around the earth. The path followed by an artificial satellite in space is named as orbit. The orbits are usually circular or elliptical. Some important orbits are:

Geosynchronous Orbits lie on the equatorial plane and are usually circular. Their altitude above the earth is around 36,000 km and inclination with equatorial plane is within few degrees ($\approx 2^\circ$). Communication satellites are placed in a geosynchronous orbit at a suitable parking slot to suit the mission's objectives. Indian Satellite INSAT-1B is placed at 74°E

Near Earth Orbits can be either circular or elliptical with altitude, under normal conditions, varying from a few hundred kilo meters to about 1000 kms. Their inclination with equator usually varies from 0° to 100° . Satellites, which in orbit, pass over the North and South Poles, are called Polar Orbiting Satellites.

Sun-Synchronous Orbits enable photography of the earth from the satellite under constant illumination condition of the sun. Such orbits have sun angle with respect to the satellite, constant for all the year round. In other words, the satellite crosses any point on the earth at the same local time. This is realised by adjusting the precession rate of the orbital plane equal to that of the diurnal angular change of the earth in its revolution round the sun, i.e. $360^\circ/365 \text{ days} = 0.98^\circ \text{ day}$. This involves suitable choice of orbit altitude and inclination. The precession of orbit plane arises as a natural consequence of the perturbative force arising from the oblate nature of the earth's shape.

Remote sensing satellites are normally placed in near earth orbits, specifically in sun-synchronous orbits. Deep space probes have special orbits normally elliptical in nature and tuned to fly past many planets as per the mission objectives.

For all normal manned missions so far conducted, near earth orbits have been chosen in view of the nature of goals set

for such missions. Typically, manned spacecrafts are placed at orbital altitudes of 300 to 450 kms and inclination (w.r.to equatorial plane) around 50°

Types of Satellites

Satellites may normally be classified into the following categories according to their mission goals:

Scientific Satellites are placed in various orbits to study numerous aspects of space sciences, viz. radio astronomy, plasma physics, cosmology, aeronomy, ionospheric, solar wind, geomagnetic, geodesy, cosmic ray physics, biology, etc.

Communication Satellites are usually placed in geosynchronous orbits or highly eccentric orbits for long distance telecommunication (telephone, telex, television transmission, radio network, etc). Recently, data transmissions have been added to meet emerging requirements for office and other business applications.

Remote Sensing Satellites provide timely and accurate information on various natural resources, both renewable and non-renewable, and environment, which is very important for the planned development of any country. Such information encompasses meteorological, geological, geographical and ecological conditions. With their proven ability for synoptic and systematic acquisition of related data for planners/managers these satellites play a unique role. They are usually placed in near earth orbits (polar/sun-synchronous).

Meteorology Satellites can be placed either in near-earth orbits or in the geostationary orbit to study the meteorological conditions viz. temperature, cloud coverage and their movement, atmospheric pressure, humidity, direction of the wind, etc. Meteosat, Nimbus, NOAA series, etc are some of the examples of these types of satellites

Navigational Satellites are usually placed in the geostationary orbit to help ship navigation, including communications among the ships and between them and

their shore stations. An international system known as INMARSAT takes care of the launch of marisat-satellites and the establishment of associated ground segments.

Deep Space Probes are usually inter-planetary missions including lunar missions meant to acquire the scientific knowledge and scientific parameters (like climatic and surface temperature, etc) of the planets. These are usually exploratory in nature.

Space Shuttles/Space Labs/Space Stations are placed in the low-earth orbits around 200 to 500 kms either manned or unmanned, to carry out experiments relating to remote sensing of the earth, study of the outer space, launch of the spacecrafts into the geosynchronous orbit.

Elements of the Space Mission

Any space mission entails the following: (a) a satellite which consists of the main frame, associated subsystems and application payloads; (b) a rocket to place the satellite into the desired orbit; (c) ground stations for controlling the satellite and data reception; (d) data processing and distribution system for users.

In a generic sense, the above four elements and the inter-linkages amongst them provide the broad framework for any space mission activities.

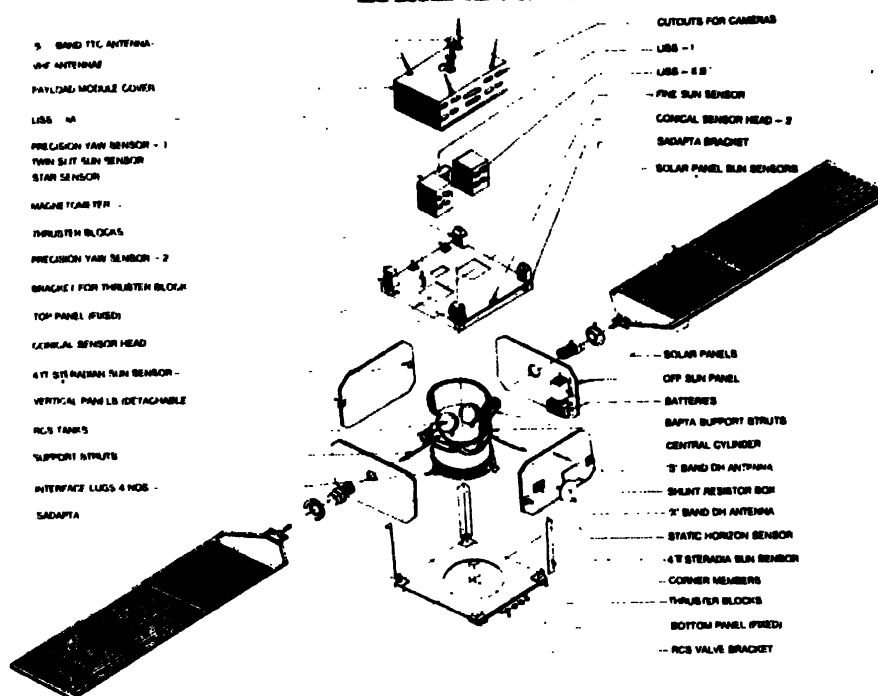
Satellite Design

The design of a spacecraft system is essentially a multi-disciplinary exercise that encompasses a wide spectrum of technologies. Central to the definition of such a system is the specification of a mission goal or a set of mission goals related usually to the areas of science applications or technology. Once the mission goal is laid down, it is possible to identify a set of interactive technical elements that include on one side, a spacecraft carrying a payload or a set of payloads appropriate to the mission and a compatible launch vehicle system for placing the satellite into a pre-selected orbit and on the other side, a network of ground based data, telemetry, telecommand and tracking systems that serve to receive the data and exercise control over the spacecraft in its orbital phase. The mission normally concludes with a set of activities involving processing, analysis and interpretation of the data obtained from the experiments.

Spacecraft subsystems

The satellite subsystems include structure, thermal control systems, power systems, communication, closed loop control and stabilisation systems, and the payload.

EXPLODED VIEW OF IRS



Structural subsystem

This is the mechanical system that holds together the different subsystems of the spacecraft during all the phases of the mission. It can broadly be divided into primary structure, secondary structure and appendages. In case of a manned satellite, the structure should be able to contain artificial atmosphere and be a barrier to outer radiation and micro-meteorites and help in controlling the heat balance between the satellite and the outer space.

Coming to the choice of materials of the structure, the primary consideration is the highest strength to weight ratio. A variety of alloys of aluminium, magnesium, titanium, beryllium and superalloys containing high nickel and cobalt have been used. Composite materials and structures employing honeycomb and sandwich constructions and using fibre glass reinforced plastic and carbon reinforced plastic provide high strength to weight ratio. Special ceramic reflective materials or ablative materials are used for the re-entry system to withstand temperatures of the order of 400°F. The suitability of the structure made of selected materials is carried out by a series of tests that are broadly classified as dynamic and static. The dynamic tests are carried out to find out dynamic characteristics (such as frequencies, mode shapes, damping, transmissibility, dynamic stresses and reflections). The static test simulate study state stresses, strains, deformities, etc.

Thermal Control Subsystem

The thermal control system of a

Anatomy of IRS: Details of technical sub-systems of Indian Remote Sensing Satellite scheduled for launch in 1985 from USSR.

spacecraft enables the maintenance of the temperature of the different subsystems, within specified temperature limits, while the spacecraft is in orbit. During its normal operations in space, a near earth orbiting spacecraft receives heat input from the internal operation of the equipment, externally from the sun (140 mW/Cm^2), and in the form of reflected albedo radiation (48 mW/Cm^2) and emission radiation (23 mW/Cm^2) from earth. Further, the spacecraft radiates heat back into space which is at a temperature of about 3°K. The objective of the thermal control design is to realise acceptable equilibrium temperatures for the different systems taking into account various heat inputs and outputs. Realisation of an effective thermal control system involves three major elements. They are design of suitable control system devices, thermal analysis and thermal testing.

The thermal design and analysis is an interactive process of the choice of suitable thermal control elements, passive or/and active, and a preliminary analysis to check in a rough way the validity of the choices and the implementation methodology. This is followed by a detailed analysis wherein the spacecraft is divided into a number of isothermal nodes. Heat balance equations are written for all such nodes and the resulting simultaneous equations are solved by standard numerical techniques on high speed computers. Results from such an analysis help in refin-

ing the implementation methodology.

Final validation of the thermal design is done by actual tests on a thermal mock-up model under simulated space conditions that include vacuum, temperature and solar radiation. The thermal model has the relevant thermal properties of the proposed design such as the configuration, thermal mass distribution, conductance paths, external surfaces, internal dissipation etc.

Manned space systems have additional elements to the thermal regulation, such as, a controlled heat rejection system using a space radiator to achieve satisfactory temperature and humidity control in the cabin.

Power Subsystem

The power subsystem of a satellite supplies electrical power to the entire subsystem of the spacecraft. The wide variety of user equipment requires power to be supplied at a variety of voltage loads, current loads and types, frequencies and degrees of regulation. This, in turn, requires a power conditioning and distribution system. There are a variety of ways by which electrical power can be generated. These include use of solar energy, nuclear reactor, isotopic and chemical energy. These provide the source of energy for photoelectric, electrochemical, thermoelectric, thermionics and dynamic conversion cycles.

Depending on the required power level and the operating life-time, specific choices of the energy source-converter combination are possible. Fractions of a kilowatt have been realised for unmanned missions using primary batteries for short flights and solar cells with secondary batteries for long duration orbital flights. Fuel cells have been employed in Gemini and Apollo programmes for providing power at kilowatt levels for a few days. Future manned systems, such as a manned space station may use dynamic power systems such as Brayton, Rankine or Stirling cycles.

Presently, the most widely employed power source system is the silicon solar cell panels in conjunction with chemical batteries and fuel cells. Chemical battery takes care of the operation of the essential systems in the orbit as well as peak load requirements and is charged in the sunlit portion of the orbit. Considering the charge-discharge cycle requirements, Ni-Cd has been found to be the most suitable with Ag-Zn battery as the next best. Typically, Ni-Cd battery can give 25 W hr/Kg .

A typical power conditioning system of a spacecraft includes converters, regulators, battery charger, power control circuitry and protection devices.

(To be continued)

BETTER ENGLISH

WRITING A PRECIS-1

BY RAGHU BHATNAGAR & RAJUL BHARGAVA
University of Rajasthan, Jaipur

How do you reduce a long, difficult passage to a few words? Under stress. In very little time allowed.

By tackling tough expressions and words in relation to their context. Sifting the important from the unimportant. Dropping all decorative details...

These and more hints on how to successfully attempt this very important section in major exams conducted by banks for Probationary Officers and by LIC and GIC for Assistant Administrative Officers.

Suppose the following passage is given to be read with care and it is then required to be summarised in approximately one-third of its size.

The real choice for the modern man is not between conservative dogmatism and rationalistic modernism, but between a mature and an immature religious faith. Both dogmatism and extreme modernism suffer from the same fundamental error. They overemphasise the intellectual element in religion. Religion can offer no intellectual certainty. It can no longer provide the unified outlook on life which characterised the medieval period. It must leave to science the undisputed right of judgment in all matters of fact which properly fall within her province. Of course religion has its intellectual aspect. The affirmations of experience must be expressed in intellectual terms. Such efforts of interpretation must use the intellectual language of the age, but they can be nothing more than a fumbling effort to explain the inexplicable, to comprehend the incomprehensible. Man's doctrine of God can and must change with changing knowledge, but the spiritual vision of God grows richer and truer for all those who honestly and fearlessly follow the religious way of life. The real need of our times is not intellectual but spiritual. It is the need for a truly spiritual faith which will refuse to cling to any particular beliefs through fear or a desire for comfort or security—a faith that is prepared for change and growth even at the cost of suffering.

The first problem faced by the reader relates to difficult words and expressions

occurring in the passage. In the present case they may be listed as follows:

conservative dogmatism; rationalistic modernism; mature; immature; overemphasise; unified; undisputed; province; affirmations; fumbling; explain the inexplicable; comprehend the incomprehensible; doctrine; to cling to.

Here it is important to note that there are two ways of looking at difficult vocabulary items. One can treat them as isolated words and expressions with fixed dictionary meanings, or, take them as parts of larger construction—clauses, sentence and paragraphs. As the latter, they as much derive their meaning from these larger units (the context) as they contribute to the meaning of these units. The key to understanding or comprehension—and without prior comprehension there can be no meaningful precis or summary writing—lies in relating words and expressions to their context. This enables the reader to understand even those items which he may never have come across before. Let us illustrate this point.

An overall reading of the passage reveals the following facts:

What is being talked about is the modern man in respect of the choice he faces in the domains of religion and spirituality, and the real need of our times. The choice is between two sets of belief, called conservative dogmatism and rationalistic modernism. And the real need of our times is not intellectual but spiritual. This renders both sets of belief erroneous, since both lay too much emphasis on the intellectual element in religion.

By looking at the passage in the above way the reader can successfully spare himself the ordeal of understanding every individual word or expression.

Yet another way of getting to know something about the difficult vocabulary in a passage can be to look at different words first in relation to one another and then in terms of their formations: thus conservative dogmatism is opposed to rationalistic modernism. If one tries to analyse the latter, its constituents turn out to be reason and modernity, both of which concepts are understandable. Conservative dogmatism thus should contain elements opposed to both reason and modernity. Since one who is conservative is not modern, obviously one who is

dogmatic will not be rationalistic. In this way two major expressions occurring in the passage can be understood just in relation to each other.

Similarly, knowing the principles of word formation, especially the use of prefixes and suffixes, can very often help understand the meanings of particular words and expressions. This would apply to *immature*, *overemphasise*, *undisputed*, *explain the inexplicable* and *comprehend the incomprehensible*. The last two expressions are of special interest since in understanding them both word formation and relating words to one another play an important part.

The next problem confronting the precis writer concerns the ways of sifting the important from the unimportant and the more important from the less important in the passage. This alone can help him shorten his draft and write a precis. Obviously two related skills are involved: elimination and selection. They are related because to eliminate the unimportant or the less important is the same as to select the important and the more important. Here comes the relevance of techniques that help achieve the above goal. A few hints may prove useful in this respect.

1. Where possible, try shortening single sentences:

Example:

It is with the greatest possible regret that I write to let you know that I am unfortunately unable to accept your very kind invitation.

: I deeply regret my inability to accept your kind invitation.

2. Try summarising groups of sentences into one sentence:

Example:

As I thus lay, between content and longing, a faint noise stole towards me through the pines. I thought at first it was the crowing of cocks or the barking of dogs at some very distant farms, but steadily and gradually it took articulate shape in my ears, until I became aware that a passenger was going by upon the high road in the valley, and singing loudly as he went.

: While lying there he heard some noise which at first he thought was made by cocks or dogs, but which later turned out to be by a passenger singing loudly as he was going through the valley.

3. Drop all decorative details not essential to a description.

Example:

The road to Farmer Riley's is smooth and dry, retired as one likes a country walk to be, but not too lonely, which women never like; leading past the Loddon—the bright brimming, transparent Loddon—a fitting mirror for this bright blue sky, and terminat-

ing at one of the prettiest and most comfortable farmhouses in the neighbourhood.

: The road to Farmer Riley's is smooth, dry and quite lonely. It goes past Loddon, which is as bright as the sky, and ends at the best farmhouse in the neighbourhood.

4. Try to use single words or phrases for lists or groups of similar objects or qualities.

Example:

The young boys and girls loudly proclaimed their preference for apples, oranges, bananas, lemons, plums and chocolate.

: The young boys and girls expressed their preference for fruit and chocolate.

5. Replace phrases and long expressions by single words where possible.

Example:

He had one of the most valuable qualities of a historian—he was able to look at both sides and judge them fairly.

: He was an objective historian.

or

As, a historian he had the precious quality of objectivity.

The foregoing examples point to one fact: a precis is an exercise in reduction. All possible ways of shortening or reducing the given passage should be tried, without affecting the main points of the original writing. The last point is important. The reader of a precis should not be fed with wrong information. In this context wrong information means two things: altering the main propositional content of the original passage and distorting the differential values of its various parts, i.e., giving disproportionate importance to the minor points of the passage in the precis. All good writing has a sort of differential calculus whereby the points intended to be conveyed to the reader are given varying values that are higher or lower relative to one another. A good precis must preserve the integrity of this calculus.

Let us now attempt a precis of the main points we have stated above for reducing the length of a given passage:

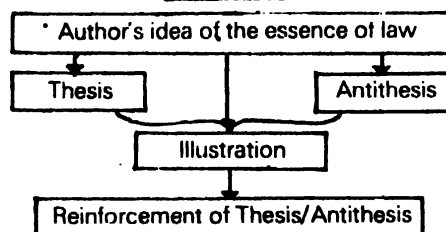
We can shorten a piece of writing by substituting words or phrases for clauses and sentences; by combining two or more sentences into one, using the shortest possible linkers like because, though, yet, however, etc.; by omitting figurative language, repetitions, elaborations and illustrations wherever possible; and by restating the main facts and ideas of the original passage in plain language, ensuring that the precis is approximately one-third the length of the original.

We will now take up a passage and illustrate the step-by-step process of making its precis.

The essence of law is that, where freedom is restricted, it should be in accordance with agreed and published rules, administered in an agreed and public fashion, by a judiciary which is independent of the executive. The idea of law is thus the very antithesis of the idea of the arbitrary power of officials. A recent and in itself rather trivial occurrence will illustrate the point. A man was walking along Knightsbridge, wearing one overcoat and carrying another over his arm. Some overcoats had recently been stolen in the district and a policeman accosted the man and asked him what he was doing with two overcoats. The man replied that they were both his, and that anyhow, it was none of the policeman's business. The policeman arrested the man on suspicion, and took him along to the nearest police station, where he was able to establish the identity and his right to both overcoats, and was promptly released. The man brought an action against the police for wrongful arrest, and, I am glad to say, was awarded £300 damages. The Lord Chief Justice expressed himself in very strong terms about the incident and voiced the hope that the time would never come in this country when we accepted the principle that officials could do no wrong.

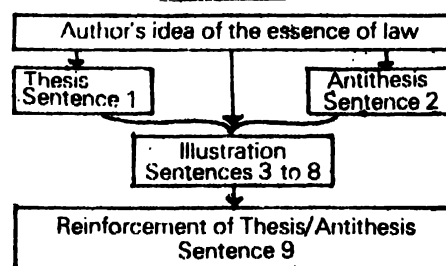
Step 1

Main Topic



Step 2

Main Topic



Step 3

Text

1 The essence...executive.

Precis

Law's essence lies in all curbs of freedom being imposed through legally established and publicly acknowledged procedures.

Text

S 2 The idea of...officials.

Precis

Law and official arbitrariness are

arithmetical.

Text*

S 3-8 A recent...damages.

Precis

Recently, after large-scale stealing of overcoats, a constable arrested a person carrying an extra overcoat on mere suspicion. It was adjudged a case of wrongful arrest and the man was awarded £300 damages.

Text

S 9 The Lord...could do no wrong.

Precis

The judge took serious exception to the incident and hoped officials would never be deemed incapable of wrongdoing.

Finally here is a straight example of a passage and its precis:

Passage

All of us are engaged in an unconscious endeavour to distract attention from the respect in which we are inferior to others and to emphasise the respect in which we believe ourselves to be superior. Each of us must feel superior in some respect; and we try, perhaps unconsciously, to convince the world that this is really the one thing that matters. If we are physically superior, then we believe—and try to make others believe—that physical fitness and strength are, after all, the real test of a man. If, on the other hand, we are physically inferior but intellectually superior, then we tend to disparage physical prowess and emphasise the importance of mental ability. If we are bad workmen or bad farmers, then we may try to shine as parlour politicians. If we are uneducated but (self-made) wealthy, well, what is the use of education, anyhow? There's far too much education—and it only spoils a man. If, on the contrary, we are educated, but unsuccessful in the business of life, then we never lose an opportunity of belittling business success. Generally, if we are successful at anything, we believe that success is won by industry, ability and character; while if we have been unsuccessful, we believe that success is a matter of luck! Isn't that so?

Precis

PSYCHOLOGY AND THE BITTER TRUTH

It is a fact of human psychology to give more importance to one's plus points while denying it to those that are minus. It is never a matter of principle or logic. Instinct leads us to rate ourselves higher because of those qualities which we have and to run down others for the ones they have but which we lack. There are plenty of examples to prove the truth of this unconscious aspect of our mind.

(To be continued)

NEWS CAPSULE

AWARDED

Jannalal Beja Awards for 1985, carrying a cash prize of Rs 1 lakh, to veteran Gandhian and former parliamentarian T.S. Avinashalingam (outstanding contribution in the field of constructive work), Sanjit Roy, of Tilonia village in Rajasthan (application of science and technology for rural development) and Amtai Wagh of Kōsbad, Maharashtra, a prominent social worker (outstanding contribution to the welfare and upliftment of women and children).

UNESCO's "education for peace" prize (1985) to India's Gen Inderjit Rikhye, and East Germany's Georg-Eckert Institute; the former for his work through the New York-based World Institute For Peace, which he founded in 1969 for carrying out peace projects, and the latter for organising international meetings on school books in which experts from the East and West take part.

APPOINTED

D.A. Desai, retired judge of Supreme Court, as Chairman of reconstituted Law Commission, and **K.N. Goyal**, retired judge of Allahabad High Court, as full-time member of the commission.

D.M. Mishra, Director-General of Central Reserve Police Force, as Director-General of Central Industrial Security Force. **O.P. Bhutani**, chief of Indo-Tibetan Border Police, will hold additional charge of CRPF.

M.L. Wadhawan, member (anti-smuggling) in Central Board of Excise and Customs, as Director-General of newly-formed Central Economic Intelligence Bureau.

Ali Lobbi, one of Egypt's most respected economists, as the country's new premier, replacing Kamal Hassan Aly in a surprise move by President Hosni Mubarak.

Akbar Mirza Khaleeli, Joint Secretary in Ministry of External Affairs, as India's Ambassador to Rome, succeeding **Homi J. Talyer Khan**, now made member of Minorities Commission.

Ashok Gehlot, Union Minister of State for Tourism and Civil Aviation, as President of Rajasthan Congress (I) Committee, replacing Naval Kishore Sharma.

ELECTED

Humayun Rashid Chowdhury, Bangladesh Foreign Minister, as President of the 41st session of the UN General Assembly, to be held in 1986.

Robert Mugabe, Zimbabwe PM, as Chairman of Non-aligned movement for next three years following NAM's choice of country's capital, Harare, as venue for next year's summit.

Gen Wolfgang Altenburg of West Germany as Chairman of NATO's Military Committee, its highest military authority, replacing Cornelius de Jager of the Dutch Army.

VISITED

King Birendra Bir Bikram Shah Dev of Nepal and his wife, **Queen Aishwarya** (Sep 18) on a three-day state visit.

SCIENCE

Cancer Cure? British doctors have succeeded in killing previously incurable cancer cells in experiments with mice and have now begun clinical trials on human beings. Bone and colon (intestinal) cancer were treated successfully at the University of Nottingham by a team of researchers headed by Robert Baldwin, a pioneer cancer specialist. The technique used involved injecting patients with bio-engineered anti-bodies armed with toxins which kill tumour cells without affecting healthy tissue. It could be another five years before the technique is widely used, says Baldwin. The university is also planning to use the technique in experiments on lung cancer, the commonest form of cancer in the world.

DEFENCE

India's first advanced light helicopter: Work on a project to build India's first advanced light helicopter has begun at the Hindustan Aeronautics Limited (HAL) factory in Bangalore. The helicopter, which will be mass produced for the three defence forces, will undergo flight tests during 1988. The ALH, which will be the principal rotorcraft of the army, navy and air force, will replace the Chetak and Cheetah helicopters. It will be developed in the anti-submarine warfare form for the navy.

US F-404 engines for India: The US has agreed to sell highly advanced engines to India for the light combat aircraft being developed by HAL. The F-404 engines reportedly surpass the F-16 engines for performance. The Reagan administration's decision to sell India the engines is viewed as a step towards building closer ties between the two countries. The engines have not been sold to any foreign country so far.

ECONOMY—National

India's foreign trade situation showed significant improvement during 1984-85, the growth in exports resulting in a decline in the year totalled Rs 11,395.98 crores and imports Rs 16,591.86 crores—a deficit of Rs 5,196 crores. In the previous year, exports totalled Rs 9,468.25 crores and imports Rs 15,382.16 crores, meaning that in 1984-85, exports rose by 20.4% and imports by 7.9%. The export performance is considered most creditable in the light of the continued difficulties in international trade. Crude oil exports rose by about 53% and items like tea, spices, rice, cotton fabrics, chemicals and handicrafts showed improvement.

Public sector to joint sector: The two massive oil refineries at Karnal and Mangalore and the aromatic plant at Seelampur, with a collective investment of about Rs 3,500 crores, will be set up in the joint sector, though originally planned as wholly public sector projects. The earlier decision has been revised due to the resources shortfall in the Seventh Plan. Accordingly, the government's participation in the share capital of the three projects is being slashed to 25%. The Cabinet Committee on Economic Affairs has asked the Petroleum

Ministry to work out the details of implementing the projects.

Revenue boost to Assam and Gujarat: The Centre has agreed to a more-than-three-fold increase in the existing rate of royalty on crude oil payable to the oil-producing states of Gujarat and Assam. The revised rate of royalty payable to the two states will be Rs 194 per tonne as against the existing rate of Rs 61 per tonne. The revised rate will boost the annual oil revenue of Assam to Rs 36 crores from Rs 20 crores and that of Gujarat to Rs 40 crores from Rs 12 crores.

Indo-British collaboration. India and Britain have signed a protocol providing the framework for transfer of British technology and establishment of joint ventures. The protocol, signed on Sep 12 in London after a meeting of the joint economic committee, agreed to give priority to enhancing India's exports and collaboration in third country projects. Potential fields of collaboration identified during the meeting were electronics, telecommunications, automobiles, anti-pollution measures, energy conservation and alternative sources of energy.

ECONOMY—International

IMF approach criticised: An increasing number of countries that get aid from the International Monetary Fund (IMF) have had to devalue their currencies in terms of US dollars and other hard money, says an IMF study. Excluding countries that belonged to currency unions, 93% of those aided by the fund had to devalue. When the fund lends money to a member the object is to help that country sell more goods than it buys, so that it can pay back the loan. One way is to lower the value of its currency, which discourages import and makes exports easier. This approach, says the IMF study, is coming under criticism. Austerity programmes lower living standards in the poor countries even further while not really encouraging banks to resume lending. The report shows that of 35 countries that signed up for an IMF programme in 1983, 25 devalued their currencies, ranging from Ghana's 83% and Zaïre's 73%.

Mexico in a soup: The IMF has cut off Mexico, long-considered a model by the fund, for unexpectedly failing to live up to its agreements with the IMF. The step is likely to aggravate Mexico's economic crisis with the country's foreign debt now about \$100b. With oil prices falling, it is now unlikely to be in a position to pay off its debts. International bankers who had agreed to reschedule repayments are now reconsidering their decision after the IMF's move.

The IMF, in its annual report, has expressed concern at the debt servicing and financing problems of developing countries and called for removal of protectionist measures by the major industrial countries. Taking a sober view of the recent global economic recovery, the IMF noted that a number of important problems remained to be dealt with. In several industrial countries, unemployment continued to increase and protectionist measures and fiscal imbalances were a source of concern. On the credit side: output in industrial countries indicated a

PEOPLE

In this day and age, when people and places are continually grabbing news headlines, no knowledge is adequate without a comfortable familiarity with these 'big' names. Here's a month-by-month coverage. In this issue, we cover September.

S.S. Barnala: Sworn in CM of Punjab Sep 29.

M.H. Beg: Former Supreme Court judge is head of the Minorities Commission

Y.V. Chandrachud: Is heading a committee examining the constitutional aspects of the Assam-Meghalaya border question.

R.F. Celeste: Governor of Ohio, led a trade delegation of India to prepare for forthcoming visit of Ohio Trade and Investment Mission to India.

M.Gaddafi: The Libyan leader narrowly survived assassination bid by Libyan army officers.

O.Palme: Re-elected PM of Norway after his party, the Social Democratic Front, won 50.1% of the national vote.

Dr Salim Ali: Famed ornithologist nominated as member of Rajya Sabha.

H.N. Sethna: Former Chairman, Atomic Energy Commission, awarded the Dadabhai Naoroji Memorial Prize for contributions to the development of science and scientific institutions in India.

H. Sterken: Defeated Balram Jakhar in the contest for Presidentship of Inter-Parliamentary Union (IPU) by a mere five votes.

Justice A.N. Sen: Of the Supreme Court is the new Chairman of Press Council

Gen Tinsu Lanonda: The Thai PM escaped a coup attempt organised by a faction of dissident army officers led by Colonel Roopacharon and brother Sq Ldr Manas.

H.Willner: Secretary in Chancellor Helmut Kohl's office defected to East Germany.

K. Willoch: Won another term as PM of Norway after a close electoral battle.

rising trend—4.9% and in developing countries—3.7% in 1984. World trade increased by 8.8%. Inflation in industrial countries was down to 4.1% and 37.7% in the developing ones (6.9% in Asia). The IMF said the current account deficits of developing countries declined further to \$44b in 1984 but their heavy indebtedness makes the financial position of many still fragile. The report attributes the improved growth in developing countries to expansion of imports and recovery. The report recommends correction of fiscal imbalances, elimination of structural rigidities that impede effective resource allocation and employment growth, "prudent" demand management and exchange rate policies.

Oil outlook: The world has enough oil to last until the middle of the next century but concentration of most of it in West Asia means that future energy crises can be expected, says a survey by the US geological department. The survey indicated that there were no potential oil bearing formations to equal those in West Asia, meaning that the region will monopolise world petroleum supplies for many decades to come. The report said new oil discoveries are on a downtrend from a high of 35b barrels a year in

the 1950s to 10b in recent years. World oil reserves now total 723b barrels, about a 36-year supply. It estimated undiscovered oil resources of 550b barrels. About 360b barrels of the known reserves and 120b barrels of the undiscovered oil are in West Asia.

EVENTS—National

HAL's new facility: The public sector Hindustan Aeronautics Limited (HAL) has designed and developed a sophisticated facility for testing gas turbine engines of passenger aircraft. The Rs 1.5 crore test facility, which is expected to result in considerable foreign exchange savings, will be used to test the Garrett engines that power the Dornier-223 aircraft HAL is building at its Bangalore complex. The new facility will eventually pave the way for indigenous establishment of future gas turbine test beds for both civil and military purposes.

Speeding up justice: A conference of chief ministers, chief justices of state high courts and law ministers ended in New Delhi on Sep 1 after agreeing on a set of measures to speed up the process of justice and make it inexpensive. The conference also decided to clear all court arrears in five years and fill vacancies in three months. The measures include establishing people's courts, mobile courts and appointing special magistrates to function as alternate dispute resolution mechanism. The conference decided that a judge of the high court will be invited as an expert to sit with a state public service commission in the selection of candidates for the subordinate judicial services. An institute for training judicial officers will be set up with the Chief Justice of the country as its chairman.

Outlay for the NCR: Haryana, Rajasthan and UP have submitted proposals envisaging a total financial outlay of Rs 3,596 crores for development of the sub-regions of the National Capital Region (NCR). Haryana proposed the maximum outlay of Rs 2,631.08 crores, UP Rs 756.81 crores and Rajasthan Rs 208.16 crores. The comprehensive programme included development of regional, urban and rural infrastructure. The proposals were for development of roads, tourism, recreation facilities, industries, power and electrification.

Supreme Court upholds dismissal: The Supreme Court has upheld the dismissal without inquiry of eight employees of the Research and Analysis Wing (RAW) on the charges of misconduct, indiscipline and insubordination. In dismissing the appeals, the court's division bench, consisting of Justices V.D. Tulzapurkar, R.S. Pathak and D.P. Madan, followed a recent judgment which held that government employees could be dismissed without inquiry if the government felt it was not "reasonably practical" to hold one.

Kanishka's insurance: The General Insurance Corporation of India (GIC), has paid Rs 116 crore to Air India on replacement value basis for the loss the latter suffered in the Boeing-747 Kanishka crash while on a Montreal-London flight on Jun 23. Air-India is now in a position to replace the aircraft. This is the largest single loss suffered by insurers in the history of aviation, according to Ashok Goenka, Chairman of GIC.

The sixth round of official level talks between India and China on the boundary issue

PLACES

Auckland: A Greenpeace flagship *Rainbow Warrior* was sunk off the coast of this city in New Zealand by the French secret service.

Birmingham: In England, scene of worst-ever racial fighting between the Black Rastafarian and Asian communities.

Capetown: Three black towns skirting this city were sealed off by the Pretoria Government Sep 8.

New Delhi: The Coordination Bureau of NAM will meet here early next year to review the international situation just before Rajiv Gandhi hands over NAM's Chairmanship to PM R. Mugabe of Zimbabwe.

Dhaka: Venue of the 1986 South Asian Regional Cooperation meeting.

Geneva: In Switzerland, 100 nations including the US and the USSR, reached accord on a final document of the 1968 Nuclear non-proliferation treaty after reviewing it for a month.

Luanda: The eighth ministerial meeting of NAM countries held here unanimously called for sanctions against South Africa.

Mexico City: The Mexican capital rocked by massive earthquakes that killed more than 10,000.

Quito: A "Khalistan" office was opened by Sikh separatists in this Ecuadorian capital.

Sofia: The Bulgarian capital hosted the sixth session of the World Tourism Organisation.

Thane: Town in Maharashtra, will stage a conference on aerobiology to be attended by 150 Indian and foreign delegates.

Tripoli: Fierce fighting between pro-Syrian militiamen and Islamic fundamentalists killed 34 and hurt 73 in this Lebanese port city.

and other bilateral matters will be held in New Delhi from Nov 4 to 11. The last round of talks was held in Beijing in September 1984. The Indian delegation to the next round will be led by A. P. Venkateswaran, Secretary in the Ministry of External Affairs.

High-level bureaucratic reshuffle: The Central Government on Sep 25 carried out a major reshuffle at the secretaries' level. Among the major changes: Health and Family Welfare Secretary Sarla Grewal, appointed Secretary to the PM; Home Secretary R.D. Pradhan as Secretary of the Departments of Internal Security, States and Home; Heavy Industry Secretary D.V. Kapoor as Secretary of the new Department of Chemicals and Petrochemicals and S.S. Shanoa, Adviser to the Punjab Governor as Health and Family Welfare Secretary.

India's first energy plantation has come up on a 12 acre site in Khandia village of Baroda district in Gujarat. The 25 kw of power being generated by the gasifier set up there is enough to meet the full energy requirements of the village. The plant requires no transmission lines; there are no transmission losses and plant load factor is high. The plant costs Rs 2.25 lakhs. The project was undertaken by the Department of Non-conventional Energy Resources which is now planning four bigger plants with a total of 1,000 kw capacity. The plant will be built in four villages in four separate states. During the next five years, it is proposed to electrify 10,000 villages through

such plantations and other non-conventional forms of energy.

EVENTS—International

Modest progress in Geneva: The 40-nation Geneva Conference on Disarmament has wound up its summer session, deadlocked over how to move towards a ban on all nuclear tests, but claiming modest progress towards another priority goal—a ban on chemical weapons. In the session, which was marked by superpower squabbling, the US stuck to its view that reductions in the world's nuclear weapon arsenals should take priority over a complete test ban, which should be a long-term target. Nonaligned countries disagreed, saying that technical means for a verification of a ban—Washington's main reservation on the subject—existed. Both superpowers spoke of modest progress in finding "broad areas" of consensus on the subject of a chemical weapons ban.

New look for British Cabinet: British PM Margaret Thatcher on Sep 2 announced a major Cabinet reorganisation, seen by observers as a step aimed at bolstering her sagging political fortunes and dealing with persistent, record unemployment. The surprise casualty in the reorganisation was the Home Secretary, Leon Brittan, who became Minister of Trade and Industry; Douglas Heud, former northern Ireland Secretary, gets the home office post. Trade and Industry Minister, Norman Tebbit, was named Conservative Party Chairman, replacing John Selwyn Gummer, who gets a junior minister's post in the agriculture department. Lord Young, a minister without portfolio, took over sole responsibility of heading a government drive on job creation as Employment Secretary—a post he earlier shared with Tom King, who now is northern Ireland Secretary.

Britain's secret bills for war: The British Government has prepared emergency plans under which it would hand over control of parts of the country to the US in time of war. As part of a secret agreement between the two countries, it drew up three emergency power bills, promising to hand over British civil and

military resources to the US. The bills reportedly contain provisions for the creation of ground defence areas around key installations, in the process empowering the government to expel people living in such areas, censure of the Press, requisitions of food and fuel stocks, among others. The third of the bills would give the government power to rule by decree, including the imposition of summary death sentences. These revelations were made by journalist Duncan Campbell in an article in the weekly, *New Statesman*. Later, the government, without confirming or denying the article, did agree that "emergency" plans had been made for possible war.

Revitalising China's leadership: More than 100 Communist Party veterans of China resigned on Sep 16 in what was called a 'giant step' towards revitalising the country's leadership. The 131 who resigned included 64 members of the powerful Central Committee and ten of the 24 Politburo members. The announcement ending the life tenure system for party bosses was one of the most sweeping changes in China since the communists seized power 36 years ago. The ten Politburo members who stepped down included 88-year-old revolutionary Marshal Ye Jianying and 81-year-old Mrs Deng Yingchao, the country's highest-ranking woman politician and widow of former premier Zhou-en-Lai.

STATES

Tribunals and courts in Orissa: The Orissa Government has decided to set up tribunals to try cases of economic offences, vigilance and those coming under the CBI's purview. Civil and criminal courts would also be set up in each tehsil to reduce pressure on sub-divisional and district courts. The state government has suggested that arguments be given in writing to save time. CM J.B. Patnaik, who revealed these measures at a conference in New Delhi, said his government had decided to set up a fund to assist needy members of the bar and would bring about the necessary legislation shortly.

Clemency in Assam: The Assam Government on Sep 3, relaxed the upper age limit by six years for a period of three years for employ-

ment in public services. The step has been taken in view of the "exceptional situation" that prevailed in the state during the prolonged agitation over the foreign nationals issue, said a state government notification.

Tamil Nadu politics: CM M.G. Ramachandran on Sep 5, reinducted Jayalalitha Jayaram, for long considered his political heir apparent, as the propaganda secretary of the ruling party AIADMK. He also divested her arch rival, R.M. Veerappan, of the sensitive portfolios of information, publicity and film technology. Veerappan, who was responsible for an anti-Jayalalitha campaign, was made minister of planning, archaeology and passport.

RESIGNED

Charles Hernu, French Defence Minister, on Sep 20 following a controversy over the sinking of a ship belonging to the ecological group, 'Greenpeace' on Jul 10. The ship was sunk, reportedly on Hernu's order, while it was preparing to lead a 'peace fleet' to the French nuclear test site at Mururoa Atoll in the Pacific.

Pranab Mukherjee as the President of the West Bengal Congress (I) Committee, three months, after he led the party to defeat in the elections to the Calcutta Corporation. **Priya Ranjan Das Munshi** has replaced Mukherjee.

N.D. Tiwari as UP CM, preparatory to joining the Union Cabinet as Industry Minister. Tiwari was replaced by **Veer Bahadur Singh**.

Nikolai Tikhonov Soviet PM on Sep 27 for health reasons to be succeeded by Nikolai Ryzhkov, a close associate of CPSU leader Mikhail Gorbachov.

DIED

Prof Rodney Porter, 67, world-renowned biochemist who won the Nobel Prize for Medicine in 1972, on Sep 6 in a four-car collision south of London.

Alexi Yepishev, 85, political chief of the Soviet armed forces for more than 23 years on Sep 16 in Moscow.

William C. Rose, who laid the foundation for modern nutritional research by discovering amino acids, on Sep 25 in Illinois, USA. A.P.

TECHNOLOGY AND INDIA

(Continued from page 17)

pite the government's stress on indigenous research and self-reliance, foreign technology continued to be imported on a large scale, especially by the private sector. Also, there was no comprehensive technology policy to nurture and promote local skills and expertise which were superior to imported technology. The Technology Policy Statement announced by the government in January 1983 sought to rectify this lacuna.

The notable feature of the new technology policy is that it recognises the capital-scarce character of a developing economy like ours and aims at ensuring that out available natural endowments, especially human resources, are optimally utilised for a correct mix between mass production technologies and production

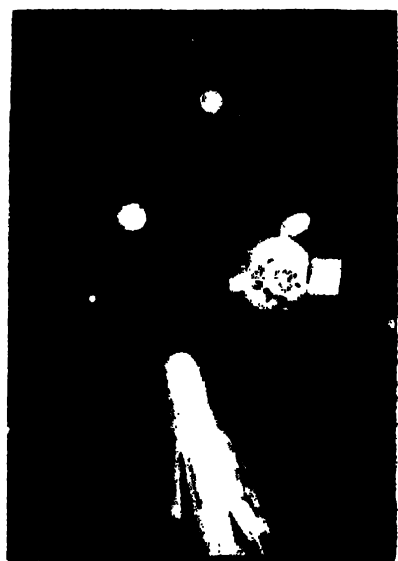
by the masses'. The statement, also underlines the need for the development of indigenous technology and efficient absorption and adaptation of imported technology 'appropriate to national priorities and resources. The Technology Policy Statement is more comprehensive than the earlier Scientific Policy Resolution in that it states clearly the aims, priorities and role of indigenous technology as well as specific conditions for import of technology and the various aspects of transfer and diffusion of technology.

One of the most important objectives spelt out in the statement is self-reliance in technology. It notes that in a country of India's size and endowments, self-reliance is inescapable and must be at the very heart of technological development. The statement lays special emphasis on enhancing traditional skills and capabilities using knowledge and techniques

generated by advances in science and technology.

Even while stressing the importance of developing indigenous technology, the new policy does not rule out altogether the importation of technology. But it sets out clear guidelines for technology acquisition. In the acquisition of technology, the statement says, consideration will be given to the choice and sources of technology, alternative means of acquiring it and selection and relevance of the products, costs and related conditions. Where the import of technology is contemplated, the level to which technology has been developed, or is in current use, within the country, shall be first evaluated. Lists of technologies that have been adequately developed to the extent that their import is unnecessary will be prepared and periodically updated. In such areas no import of technology would normally be permitted. B.B.

THE RETURN OF HALLEY'S COMET



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CURRENT EVENTS—National (Continued from page 23)

ing 1984-85. The wholesale price index rose from 7.6% on a point to point basis as against 8.9% in the previous fiscal year and by 7% as against 9.5% on a weekly average basis. Apart from this, the growth rate of national income during 1984-85 averaged a modest 3.5%-4%.

The report, however, cautions against complacency. For, the medium term outlook for growth faces several constraints. Among these are infrastructural limitations arising from lower than planned rates of growth especially in the output of power. Then, resource constraint is also emerging as a serious factor as reflected in the steadily increasing fiscal deficits. Therefore, rate of savings and their efficient use are extremely important.

The balance of payments position also needs attention because of the continued need for essential imports and debt service obligations. In order to improve the productivity in the economy improvement in the infrastructure industries, higher capacity utilisation in the public and private sectors, avoidance of cost over-runs, reduction in incidence of industrial sickness and timely completion of projects are essential.

The agricultural sector will have to grow at a higher rate to raise the national income and also help achieve the requisite 5% growth rate of the economy in the Seventh Plan up till now the increase in agricultural output has mainly been from production gains in wheat and rice. Performance of other crops like pulses and oil seeds and of dryland farming, which account for 73% of the cultivated area has been far from satisfactory and production of sugarcane continues to exhibit a marked instability.

The report categorically states that raising the gross savings rate above 22-23% of the GDP is an extremely difficult task. The balance of payment situation may well come under strain during the latter half of the Seventh Plan period. This is primarily because the short term prospects of a further major set up in crude oil production are not very heartening and neither are prospects for concessional external assistance particularly good. The debt service obligations particularly to the IMF are likely to pose a considerable burden too. And therefore exports and import substitution will undoubtedly play an important part. India may also have to rely on commercial borrowings to a large extent.

Meanwhile, various efforts are being made to improve the export performance. The recent import-export policy and fiscal incentives to exporters should go a long way in achieving this target. The report also states the need for increasing the capital base of the banking industry and urges commercial banks to raise profitability through greater cost consciousness, improvement of recoveries, reducing non performing loans and improving the quality of loan assets and increasing non interest income.

SUGAR IMPORTS SWEET-SOUR

News from the sugar market continues to be disquieting. The government, to cope with the rising trend of both sugar prices and internal consumption and the declining production, has decided to import more sugar to meet the demand of the 1985-86 sugar season. The import of additional sugar supplies will also provide a cushion for the shortfall in the arrival of the earlier contracted 10 lakh tonnes of sugar of which only 7.01 lakh tonnes has arrived till now.

This additional 10 lakh tonnes of sugar is expected to stabilise sugar prices and ease the availability in the next few months. Already the greater supplies of imported sugar reaching the market have caused a marked downtrend in prices in most areas. Wholesale prices in the northern and western zones declined by 13%, by 12% in the eastern zone and by 21% in the southern zone and now range between Rs 650 and Rs 690 per quintal.

The Centre has attributed the recent decline in sugar output to shrinkage in cane acreage, diversion of cane to gur and khandani, waterlogging in Bihar and UP. Current season production is estimated at a mere 61 lakh tonnes compared to the record 84.38 lakh tonnes during the 1981-82 sugar season. On the other hand internal consumption is expected to rise from 75.70 lakh tonnes in 1983-84 to 81.75 lakh tonnes in 1984-85, with a likelihood of further rise in the near future. The government has, therefore, advised states to enforce measures for prohibiting unwarranted diversion of sugarcane to power crushers and khandani units in the reserved areas of sugar factories as also excise rebate for early crushing.

J.S.

ECONOMY

WORLD BANK REPORT

The World Bank report on Indian economy, more than being just an annual ritual, reflects the state of India's economic scene. It is on the basis of this report that the economists analyse the economic policies of the year preceeding the financial year reported. It reviews and chalks out a future course of action for the optimum utilisation of domestic and foreign resources.

The latest World Bank development report (1985) is a mixed bundle of praise and warning. It is, in fact, one of the most "critical" analyses ever made by any independent agency on India's future plans to stimulate economic growth in the next five years. On the one hand it praises PM Rajiv Gandhi's efforts to open up the economy, simplify licensing procedures and cutback and rationalise taxation rates—both individual and corporate—and acknowledges India's brilliant handling of its balance of payment at a time when most of the developing countries have run up huge external debts. On the other hand it warns that the 5% a year economic growth target set for the period 1985-90 is extremely ambitious and achievable only, "if substantial policy changes are initiated domestically." To achieve this daunting target the study has recommended an increased in external borrowing, relaxation of import restrictions and a much greater emphasis on export promotion.

Like other past reports, this year's study also accuses the Union Government of a bias against export and for import substitution. As a result of this policy the production for exports in 1984-85 constituted only 6% of the country's GNP. The study does not, however, advice complete abandonment of the policy of import substitution, and attaches vital importance to the expansion of the production of major bulk commodities; but it does strongly recommend the association of multinationals in the effort.

The effect of this prolonged neglect of export in India is 'manifested in the adverse impact on the balance of payment position. Thus despite best efforts the external trade deficit has remained about Rs 5,000 crores ever since 1980-81 and there is not much likelihood of the deficit reducing further in the future. In fact there is every chance of a significant increase in the national trade deficit with the shift in policy emphasis to export liberalisation and modernisation of Indian industry through the impact of technology.

According to the report if exports do not expand by 9% per annum, by 1990

the government will face a choice it will not want to make—either increase external borrowings to the point where the debt service ratio increase dramatically or settle for a lower rate of growth."

Available data indicate that India's total external debt on Mar 31, 1985, stood at Rs 28,094 crores and debt service payments in 1984-85 totalled Rs 1,115 crores. However, with IMF loan repayments starting from 1985-86, debt services payment will more than double to Rs 2,845 crores in that year, rising to a peak of Rs 4,045 crores in 1988-89. Such an outflow of resources on current liabilities, will impose a heavy burden on India's capability to manage its balance of payment equilibrium in the years ahead. Therefore in order to retain a healthy balance of payment position, India will have to remain active in the international capital market. I.S.

DEBT CRUNCH

Laertes son of Polonius, Lord Chamberlain of Denmark, was all set to return to France after the coronation of Claudius. The ship was about to sail when Polonius, possibly suspicious of Laertes' habits, advised thus. Neither a borrower nor a lender be." That was way back in the 16th century. Today, even Shakespeare would have been flabbergasted at the ease with which people institutions and governments get into debt.

The debt situation on the world scenario is slowly but surely getting out of hand. The Third World as a whole has to repay a mind-boggling total of over \$1,000b, and barring a monetary miracle, this gigantic amount cannot be returned in the foreseeable future. This sad plight of the Third World countries was the focus of attention of a seminar held recently in Madras. Francis Colaco of the World Bank, who is the author of *World Development Report 1985* came in for some close questioning by the participants. The pertinent questions that surfaced related to (1) the bank's concept of 'adjustment' implying that the poorer countries have to adjust themselves to the policies of the rich (2) the institutional changes sought in the North-South negotiations; (3) the 'pseudo objective' stance of the bank.

It was revealed that the plight of the developing countries has steadily worsened during the last 15 years. In fact, the present debt crisis in the Third World countries seems to be reminiscent of the Great Depression of the 1930s. The LDCs (lesser developed countries) have also fared badly in a variety of other ways as well in an environment of global inflation. The donor-countries and the multilateral lending institutions vigilantly protected themselves from the inflationary erosion of the amounts lent to the developing coun-

tries by promptly imparting the necessary corrections to the rates of interests and repayment period. Consequently, the debt service payments have increased from \$9.3b in 1970 to a staggering \$100b in 1984. The rise reflects both the increased amount of debt and also the higher level of interest rates.

As inflation sky-rocketed, the lending institutions and banks saw that it was in their interests to ensure that the borrowing countries did not take too long over repaying the loans. The Third World countries had to rely on private sources and their higher terms because the flow of long-term and soft International Development Association loans were affected by aid weariness.

It is therefore hardly surprising that the developing countries including India have sought the rescheduling of their foreign debts. The idea, mooted by Fidel Castro, provided a badly needed relief to the debtor countries as the repayments are spread over a long period.

The lenders of ODA representing assistance given by the government of the developed countries normally confine debt relief to current maturities and the governments seek assurances on the economic soundness of the borrowing countries. The lending countries prefer to do rescheduling on a year-to-year basis as it helps to keep tabs on the economic situation of the borrowing countries. But this year-to-year system is not very pleasing to export credit agencies in the lending countries as their sources of funds are the private lenders.

The donor countries and the lending institutions are fully conscious of the fact that they have to keep in mind the mounting burden of debts on the developing countries. The Third World countries, when hit by lack of resources on account of having to meet huge debt service obligations, have to slash down their imports from the developed countries. Apart from this the growing concern of developing countries at the staggering debt burden might give birth to the idea of repudiating or declaring a moratorium on foreign debts. Growing consciousness of these facets of repayment obligations has led to the World Bank report for a once-and-for-all restructuring of developing countries debt into long-term low interest loans.

Dr C.T. Kurien of the Madras Institute of Development Studies opined that hard-pressed developing countries should opt for repudiation without any qualms. His suggestion that the writing-off of debts should be institutionalised sounds constructive enough and it can be taken as a reasonable way to opt out of the global scenario of crushing debts burdens.

N.L.

The world met on the track for the World Cup Athletics, in 1977, at Dusseldorf, in an effort to break off its shackles with the Olympic movement. The year 1983 saw the birth of the World Athletic Championships, at Helsinki. And with Usha striking gold at the Sixth Asian Track Meet, the Sri Lankan umpires had no right to disgrace India at the pitch—or was the match wrongly timed? Jog along to have a healthy look at the sports world!

SIXTH ASIAN TRACK & FIELD MEET

USHA'S GOLDEN SCOOP

V. KRISHNASWAMY REPORTS FROM JAKARTA

India achieved their finest success in international athletics with an impressive tally of 10 golds, five silvers and six bronzes at the recently concluded Sixth Asian track and field championships at Jakarta. They were second only to China, who had come with a 73-member squad, while India had 42 athletes to go with the 10 odd officials. The Indians managed to relegate a depleted Japan, once the forerunner in Asian athletics, to the third spot.

The five-day meet dominated by India's P.T. Usha, who bagged an unprecedented five golds, four of them in individual events, saw a general rise in the standard of Asian athletics. There were records galore—six Asian records, and 16 meet records—which bear testimony to the elevation in the standards, but one must not fail to mention in the same breath that even the best in Asia have some way to go before they reach the world level. The results achieved by the leading Asian athletes in the World Cup at Canberra, a week after the Asian championships, is an evidence of this.

One of the biggest surprises, at least, a puzzle for the common man, is the comparative failure at the world level of Usha. How can an athlete who is head and shoulders above everyone else in the continent be so far behind the world's best? Usha during the course of her 400 m run in Jakarta clocked 52.66 seconds for the best-ever by an Asian and then went one step better at Canberra, chopping off almost a whole second of it, timing 51.61 seconds. But even then she managed only the seventh place out of eight runners at the World Cup which was won by Marita Koch of GDR, who shattered the world record in 47.60 seconds. Usha won the 100 m, 200 m, 400 m and 400 m hurdles besides a gold in 4x400 m relay and a bronze in 4x100 m relay.

Usha's lagging behind at the world level can be attributed to our system and sports set-up. It is only in recent years that Indian girls have been encouraged to take up sports seriously. Otherwise it was nothing more than a casual pastime for the more affluent. Just about 10 women have represented India at the Olympics from the time they first made an appearance at that level in 1952. Need one say anything more than that. But considering that late start, the Indian women have made a significant progress. The Los Angeles Olympics alone provide evidence of that. Usha became the first-ever Indian woman to run an Olympic final, where she missed the 400 m hurdles bronze medal by

a proverbial whisker, one-hundredth of a second. She was also a part of the 4x400 m relay team which came seventh in the final. Never before has India been represented in two athletic finals at the same Olympics—I am discounting the instance of 1908 Olympics when Norman Pritchard got two medals, for that was an era altogether different.

But granted the women began late and the social constraints have begun to give way only recently, what about the men, one may ask. They won three golds: (see results) against the



Shiny and Usha: Stars of the month.

women's tally of seven. The women hold promise of becoming world class in the not-too-distant future. But the men, despite their three golds give no such indication, which if any, is that of stagnation and regression.

Balwinder Singh won the shot put with an effort of 17.88 m. Raghubir Singh Bal took the hammer gold with 64.34 m and Bagicha Singh the 1,500 m gold in 3:56.85. Compare that with the world standards in these events—of about 22 m in shot put, 80 m plus in hammer and timings of 3:35 and 3:40 in 1,500 m.

The only way to improve our performance level is to provide something more by way of

THE WINNERS

Results of the Sixth Asian track and field championships held at Jakarta from Sep 25 to 29, 1985 (the winner in each event and the performance of the Indian participants).

MEN: 100 m: 1. Chen Zheng (Chn) 10.28 secs (ACR & AR). Anand Shetty out in semi-finals; Adille Sumariwala eliminated in the first round. 200 m: 1. Jang Jae Keun (Kor) 20.57. Rami Reddy seventh in final; Anand Shetty out in semi-finals. 400 m: 1. Isidro Del Prado (Phi) 45.61 (ACR). Pavittar Singh and C.S. Bajwa out in semi-finals. 800 m: 1. B.Rajkumar (Mal) 1:47.37. 2. Charles Borromeo (Ind) 1:47.99. Bagicha Singh did not finish. 1,500 m: 1. Bagicha Singh (Ind) 3:56.85. 2. Suresh Yadav (Ind) 3:56.90. 5,000 m: 1. Kozo Akutsu (Jpn) 14:22.11. 4. Raj Kumar (Ind) 14:34.85. 10,000 m: 1. Zhang Guo Wei (Chn). 4. Vinod Kumar (Ind). Marathon: 1. Ling Jong Hyen (DPRK) 2:20:29. Rajkamal Dogra did not finish. 4x100 m relay: 1. China 39.34 secs (ACR & AR). India eliminated in the heats with 41.18 seconds. 4x400 m relay: 1. Iraq 3:07.68. 5. India 3:11.65. 110 m hurdles: 1. Yu Zhicheng (Chn) 13.94. Praveen Jolly did not finish in heats. 400 m hurdles: 1. Ahmed Hamada (Bah) 49.88 secs. 3,000 m steeplechase: 1. Shigeyuki Akiyo (Jpn) 8:46.96. 3. S. Pichaiiah (Ind) 8:48.14. 20km walk: 1. Liu Jianli (Chn) 1:26:51.8. 2. Chand Ram (Ind) 1:27:19.5. 7. Baldev Singh (Ind) 1:37:13.7. High jump: 1. Shuji Ujio (Jpn) 2.24 m. Pole vault: 1. Jie Zebiao (Chn) 5.30 m. 5. Vijay Pal Singh (Ind) 4.90. S.S. Tanwar (Ind) 4.60 m. Long jump: 1. Liu Yuruang (Chn) 8.00 m. Triple jump: 1. Tian Hongxian (Chn) 16.38 m. Shot put: 1. Balwinder Singh (Ind) 17.88 m. 3. Bahadur Singh 17.21 m. Discus: 1. Li Weinan (Chn) 55.30 m. 3. Kuldip Singh

(Ind) 52.36 m. Hammer: 1. Raghubir Singh Bal (Ind) 64.34 m. Javelin: 1. P.U. Buchiren (Chn) 76.56 m. 5. Sarnam Singh (Ind) 72.52 m. Nirmal Singh ninth. Decathlon: 1. Guu Jin Shoen (Tpe) 7,538 points

WOMEN: 100 m: 1. P.T. Usha (Ind) 11.64 (Clocked 11.39 secs in semis—ACR). 200 m: 1. P.T. Usha (Ind) 23.05 (ACR). 3. Vandana Rao (Ind) 23.79. 400 m: 1. P.T. Usha (Ind) 52.62 (ACR & AR). 2. Shiny Abraham 53.32. 800 m: 1. Shiny Abraham (Ind) 2:03.16 (ACR). 1,500 m: 1. Yang Liuzia (Chn) 4:19.11. 4. Suman Rawat (Ind) 9:35.40. 3,000 m: 1. Kim Lyong Son (DPRK) 9:27.75. 3. Suman Rawat (Ind) 9:35.40. 10,000 m: 1. Bock Do Jong (DPRK) 35:17.35 (ACR). Marathon: 1. Asha Aggarwal (Ind) 2:48:53. (ACR) 4x100 m relay: 1. Thailand 45.07 (ACR & AR). 3. India 45.22. 4x400 m relay: 1. India 3:34.10 (ACR) 100 m hurdles: 1. Liu Huan Jin (Chn) 13.22 (ACR). 5. M.D. Valsamma (Ind) 14.02. 400 m hurdles: 1. P.T. Usha (Ind) 56.64 (ACR). 2. M.D. Valsamma (Ind) 57.81. High jump: 1. Yang Weiqin (Chn) 1.90 m. Long jump: 1. Huang Donhuo (Chn) 6.60 m (ACR & AR). Shot put: 1. Cang Yu Chen (Chn) 18.36 (ACR). 6. Vijaymala Bhanot (Ind) 12.13 m. Discus: 1. Li Xiaohui (Chn) 58.38. 9. Vijaymala Bhanot (Ind) 37.28 m. Javelin: 1. Zhu Hong Yang (Chn) 56.84 m. 6. Razia Sheikh (Ind) 45.40 m. Heptathlon: 1. Ye Liang Ying (Chn) 5,319 points. 6. Reeth Abraham (Ind) 4,619 points

MEDALS TALLY:

China	19	15	7
India	10	5	6
Japan	3	7	6

V. SWAMINATHAN

... Coasting has to be much more speeded. Our present coaches, at least many of them, are of the variety who have got their degrees in classrooms at the N.I.S. ... Very few of them had done the event they have become coaches in. Also, there is a definite lack of commitment on the part of the coaches and in some cases even the athletes. For many of our athletes, sport is one way to get a promotion or a better job elsewhere. Once that is achieved, sport becomes secondary. Again one cannot blame the sportsmen wholly for it, for the system has been so built up over the years, that it cares only for those at the very top.

While one does not grudge all that has been given or will be given to Usha and other gold medal winners, would it not be appropriate to give something by way of awards to others who got silvers or bronzes and in some cases minor placings in events where the concerned athlete has shown noteworthy progress.

"I think India has more potential than even China and Japan. The Kerala girls and the hefty lads from the North can get you medals at the international level. But you have to search for these people. Right incentives and the right approach is what you need. It is not advisable to bring only medal prospects for a big meet. In many cases a junior can learn by just watching the top-flight stars and then can gain a lot by competing with such athletes," comments Derek Boosey, a triple jumper, who born in India could not represent it at the Olympics. He later went off to England and came to Olympics from there. Presently he is engaged in the preparation of the South Korean team for the next year's Asian Games in Seoul.

The dividends of specialised foreign coaching is seen from the results achieved by the Middle-East countries. Small nations like Qatar, Bahrain, Iraq, Oman and Kuwait have coaches from the GDR, USA and likes. Admitted these oil-rich countries can afford to get good coaches at exorbitant salaries, but maybe India can get at least one or two or try for them even on exchange programmes. But for that a lot of spade work has to be done and that is for officials in the federations to do.

The above-mentioned facts apart, two other points, purely athletic in nature, too emerged from the meet in Jakarta. One that the Asian sprinting standards in Asia have risen most dramatically. Five of the six Asian records in the meet were established in the sprint area.

The second point was the continuation of Japanese disregard for the Asian championships. Once again they preferred to send only second-stringers to this meet. Japan have many top class long-distance runners, like the Soh twins, Takeyuki Nakayama, Seko and others, who have made an impression at the highest class of the sport. Their absence from Asian meets naturally affects the level of performance. In the ultimate analysis, this does not work out in the interest of Asian athletics, which stands to gain a lot by stiffer competition in the region.

All said and done, the Sixth Asian track and field championships brought out many thought provoking points, but one hopes we learn from them and not get carried away by the magnitude of our success at Jakarta. The aim should be to improve our level by the time the next edition of the championships comes around in 1987, when they will be hosted by Singapore.

CRICKET

INDIA XI vs SRI LANKA XIII

Indian cricket reached its nadir at Colombo on Sep 11. Its grave was dug by 11 men in white and two in black and white. The men in white turned out to be more lethal as they provided the crucial breakthroughs. This is not to belittle Sri Lanka's 1-0 victory in the three-Test series. But the standard of umpiring took away much colour from their historic victory at the Saravanumuttu Stadium. A number of glaring umpiring errors did irreparable damage to Indian batting in the Second Test. Said Indian skipper Kapil Dev: "We were outplayed in umpiring too," in addition to batting, bowling and fielding.

Full marks, however, to the Sri Lankans who humbled the 'big brother' very convincingly considering the fact that they are the 'babes' of international cricket. The Sri Lankans won the Second Test by a huge margin of 140 runs and the record books would record precisely that. There will be no mention of the fact that a couple of atrocious decisions completely rattled the confidence of the Indian batsmen. The dismissals of K. Srikanth and Dilip Vengsarkar changed the complexion of the game and India never recovered thereafter. For instance: Srikanth was ruled out twice off one ball. First, he was given leg before the wicket and during the process of protesting to the umpire, Srikanth walked out of the crease when one of the fielders removed the bails and appealed for a run out. And lo and behold! the square-leg umpire ruled Srikanth run out. It was a blunder. Technically, the ball became dead following the first lbw ruling. This example would lead one to go in for neutral umpiring. It would at least remove the distrust from the minds of the visiting batsmen.

But umpiring apart, one of the main reasons for India's dismal performance was the insipid show by their batsmen. Not one batsman, except Vengsarkar and Mohinder Amarnath, was able to dominate the bowling. Srikanth, the few times he "got onto the front foot, drove the Lankan attack out of its mind" Pity he was thrice cut off in full flight. India's batting failure was inexplicable.

If batting let India down, the bowler did no better. The strike bowlers, Kapil and Laxman Sivaramakrishnan, were hammered out of length. It is very rare to see batsmen stepping out to blast Kapil and Siva, both indisputedly fine bowlers. But the failure of Kapil and Siva to strike regularly put tremendous pressure on the two youngsters Chetan Sharma and Maninder Singh and both proved incapable of emerging matchwinners.

The Indian batsmen could cross 300 only once in six innings. No team can expect to win with such meagre scores particularly with ineffective bowling making the task more difficult. The Indian bowlers bowled poorly and when they did look like coming to terms with themselves, the fielding messed up their chances. Seven catches were dropped by the Indians in Sri Lanka's first innings of the Second Test. It was a poor reflection on a team which dropped just two catches during the entire World Championship of Cricket in Australia. All these slips combined with poor, if not biased umpiring contributed to India's humiliation in Sri Lanka.

The umpiring standard in Sri Lanka gave little chance to India as the suspect decisions came at crucial junctures. Srikanth was the worst sufferer and it was only when he was involved that the umpires seemed biased. It can be attributed to the political situation in Sri Lanka since Srikanth hails from Tamil Nadu. The normally well-behaved Indian opener's irate behaviour also goes to prove that everything was not fair. These developments must have shattered the confidence of the Indian batsmen who knew they would not be spared or given the benefit of doubt. Such an atmosphere and psychological fear of the umpires goes a long way in destroying the confidence of any batsman. Same was the case of the Indian bowlers who found their appeals being turned down most arrogantly by the Sri Lankan umpires. And the fact that they enjoyed the umpires' patronage emboldened the Sri Lankan batsmen and they were able to dominate the Indian bowling in a manner they would probably not be able to outside their country.

India's loss in Tests is nothing new. We have not been faring well in Tests during the last five years. Indians have won just two of the last 40-odd Tests they have played. The loss in the one-day international was a near thing. Only 14 runs stood in India's way. That, too, resulted from a tactical blunder by Kapil who sent in Gavaskar ahead of himself. More imaginative captaincy would have helped India but then Kapil was never a great thinker of the game. He personally failed to lead from the front and certainly failed to inspire the boys.

VIJAY

ATHLETICS

TRACKING DOWN WORLD MEETS

BY RANJIT BHATIA

World Cup Athletics

Athletics has been the key sport of the Olympic movement. Ultimate success in any track and field event has been attributed through achievement in the Olympic Games. There was, until recent times, no other form of world championship in this sport. Unlike most other sports people, athletes had to rely on the Olympics, held once every four years, as their major forum for international competition. The post-World War II years saw a steady growth of the athletic movement to such an extent that it became necessary to provide further incentives to outstanding men and women to prove their worth.

For some years discussions went on in the executive of the International Amateur Athletic Federation (IAAF) on the kind of World Championships to be introduced in the non-Olympic years and ultimately it was decided to begin with an Inter Continental World Cup Athletics to be held every two years. The competition

*Former Olympian, teaching at St Stephen's College University of Delhi.

involved one participant in each of the events from Europe, North America (minus USA), Africa, Asia, Oceania (Australia, New Zealand and the South Pacific), together with teams representing USA, Soviet Union and the European Cup winners. The first World Cup was held in 1977 at Dusseldorf in Germany and proved a tremendous success, not only in terms of raising funds through gate money, but also by providing top class competition of the kind that attracted worldwide attention. The second meeting held in Montreal two years later, succeeded to a much lesser extent, since athletics in Canada has never been considered a crowd-pulling sport. The organisers of the III World Cup in Rome, realising that they might fall in a similar trap, appealed to the IAAF to allow participation by hosts Italy as the ninth team. This was readily accepted and local enthusiasts were able to witness their national heroes compete against the world's best.

In the three World Cup meetings to date the battle for supremacy has been between the US, Soviet Union and the GDR, with the last of these monopolising the women's section. The weak links in the movement have been Africa and Asia. While the former has provided spectacular winners like Miryuts Yifter (Ethiopia) in distance running events, they are particularly weak in field events. Asian athletes to date have been more or less overwhelmed by the occasion and there is the suggestion that they still have a long way to go before they can provide sufficient number of men and women to finish among the first three. Chinese athletes Zhou Zhen Xian (triple jump) and Zhu Jian Hua (high jump) have stood out so far as Asia's leading performers.

The 1985 World Cup has been held after a gap of four years because of the introduction of a World Athletic Championships* in the 1983. During this break Asia, Africa and Australia have made giant strides and the competitions in the Australian capital, Canberra, certainly show signs of this upsurge.

These were primarily introduced for many reasons. First, athletics did not have a world championships for individuals. Second, Olympics were too expensive an affair. A world championships in just athletics was 'manageable'. Third, because of the increased TV and media coverage that this sport was enjoying, there was an upsurge in athletics. Athletes expressed the desire to have a world championship of their own—away from the Olympics.

World Athletic Championships

The first ever World Championships in athletics, outside the realm of the Olympic Games, was held in Helsinki from Aug 7-14, 1983. It attracted over 1,300 athletes from 154-member nations of the IAAF—a record entry from any viewpoint. This was a fitting climax to the proposals made three years earlier, in Paris, when the Council of the IAAF which made it possible for almost every member to take part in it. There were two categories of participants. The A category comprised athletes who had attained stipulated qualifying standards, with the proviso that not more than three per event could be entered from any country. For those nations whose representatives could not achieve this, there was 'B' category participation through lower standards. In the latter category, however, entries were restricted to one person per event from a country.

The extraordinary success of the Helsinki meeting may be attributed to the foresight of

the IAAF which made it possible for almost every member to take part in it. There were two categories of participants. The A category comprised athletes who had attained stipulated qualifying standards, with the proviso that not more than three per event could be entered from any country. For those nations whose representatives could not achieve this, there was 'B' category participation through lower standards. In the latter category, however, entries were restricted to one person per event from a country.

The Helsinki meet provided a fitting curtain raiser to the Los Angeles Olympics the following summer. It launched Carl Lewis (USA) as the phenomenal sprinter, Moroccan Said Aouta as the extraordinary middle-distance man, Czechoslovakia's Jarmila Kratochvilova in 400 and 800m and the host nation's javelin ace Tina Lillak. They together with names like Evelyn Ashford, Daley Thompson, Mary Decker and Marita Koch—took track and field athletics to prominent spaces in sports columns and certainly helped to raise interest in athletics. The income from the Helsinki session was sufficient to encourage the IAAF launch development programmes virtually independent of the Olympic umbrella, culminating in this year's IAAF Grand Prix circuit meetings.

The next World Championships are scheduled for 1987, in Rome.

AROUND THE TRACK IN 30 DAYS

Athletics

Two international marathons were held on Sep 15, one of which was won by a Japanese, credited with the fifth fastest time in his earlier races. At Seoul, venue of the next Olympic Games, Takeyuki Nakayama of Japan won the marathon in 2:10:9 sec. The European Marathon Cup was won by East Germany's Michael Heilmann in 2:11:28 sec.

Badminton

The 5th 'ALBA' World Cup Championships ended on Sep 8 at Jakarta in triumph for the home players, while the Chinese women remained unbeaten as usual. Results of finals:

Men: Singles: Ick Sugianto (Indonesia) b Morten Frost Hansen (Denmark) 15-11, 8-15, 15-4. **Doubles:** Liem Swie King and Harianto Kartono (Indonesia) b Li Yongho and Tian Bingyi (China) 15-11, 11-15, 15-11.

Women: Singles: Li Ling Wei (China) b Ivanna Lie-Ing Hoa (Indonesia) 11-3, 11-2. **Doubles:** Lin Ying & Wu Dixi (China) b Yun Ja Kim & Sang Hee Yoo (South Korea) 15-4, 15-5. **Mixed doubles:** Christian Hadinata &

RECORDS OF THE MONTH

Men: High jump: 2.41m Igor Paklin (USSR) at the World University Games, Kobe (Japan). The previous record—2.40 m—was established on Aug 11 at Moscow by Rudolf Pavarnitsyn, also of USSR. **Shot put:** 22.62m Ulf Timmermann (GDR).

Women: 400 m hurdles: 53.56 sec Sabine Busch (GDR). **Long jump:** 7.44 m Heike Daute-Dreschler (GDR).

Ivanna Lie (Indonesia) b Sten Fjeldberg (Denmark) & Nora Perry (England) 15-11, 18-17.

Sixteen of the top men, and 12 top women participated in these championships—the first of which was won by India's Prakash Padukone way back in 1981. This year he failed to make the semi-finals.

Boxing

On Sep 21 at Las Vegas, heavyweight champion of the world, 35-year-old Larry Holmes (USA) lost a 15-round unanimous points decision to Michael Spinks (USA), the world light-heavyweight champion. This was the first time in professional boxing that a heavyweight had lost to one in a lighter weight division.

Chess

At the Greater London Chess Championships, which concluded on Sep 7, the women's section was won by an Indian girl—Bhagyashree Sathe, who beat reigning world champion Maya Chiburdanidze of the Soviet Union. This win gave Bhagyashree her third and final norm to qualify as International Women Master (IWM).

Crickets

The English Sunday League Championship and the Natwest Trophy, both limited-overs tournaments on the English county circuit, were won by last year's champion county Essex. In the former, Essex beat Yorkshire and in the latter, Nottinghamshire.

The Doodhar Trophy—the national one-day competition on a zonal basis—was retained by West Zone, when they defeated North Zone, in the final at Madras on Sep 29.

Football

After a lapse of two years, East Bengal club, regained the Calcutta Senior Division Soccer League, the premier league in the country.

The 9th Sub-junior National Football Championship for the **Mir Iqbal Hussain Trophy** at Mysore/Bangalore was won by Karnataka who beat Manipur.

Golf

The biennial **Ryder Cup** this year was won by the Europe and Great Britain team, defeating the US by 16½ pts to 11½ pts, on Sep 15. The venue was the The Belfry, near Sutton Coldfield in the English Midlands. This prestigious event is named after Samuel Ryder, an English businessman and golf-lover who donated the cup in 1927. It has principally been a contest between the professionals of Britain and the US. In 1977, other European players were included along with the British team to strengthen the competition. This move paid dividends this year, when the US lost for the first time after 1957, and it was only the fourth occasion that the British team won in the 48-year history of the tournament.

Tennis

The capacity crowds at the Louis Armstrong Stadium at Flushing Meadow in New York, witnessed how three Czechs and an ex-Czech simply dominated. The Results of the US Open championships which ended on Sep 8:

Men: Singles: Ivan Lendl (Czechoslovakia) b John McEnroe (USA) 7-6, 6-3, 6-4. **Doubles:** Ken Flach & Robert Seguso (USA) b Henri Leconte & Yannick Noah 6-7, 7-6, 6-0.

Women: Singles: Hana Mandlikova (Czechoslovakia) b Martina Navratilova (USA)

(Continued on page 60)

CURRENT EVENTS: International

(Continued from page 28)

and Mitterrand. Trying to bridge differences at home, Mitterrand visited Mururoa atoll, where France holds its atomic tests, on Sep 13. It was meant to be a gesture of defiance and was meant to show that France was determined to protect its interests in the South Pacific. While both the Left and the Right applauded Mitterrand at the time, the subsequent exposure dampened their enthusiasm for the President. Australia, New Zealand and the region's microstates also criticised his visit as a "provocation". While the French Government has accepted responsibility for the flagship affair, it may not be the end of the matter.

Despite all its troubled times, France played hostess to Soviet leader Mikhail Gorbachov, on his four-day state visit to the country. Gorbachov, on his first foray to the West after assuming power, went with the objective of convincing the European nations—France and England—about his proposal for separate nuclear arms talks.

Though France reaffirmed its original stance of condemning the US Strategic Defence Initiative, it refused to be drawn into any separate discussions with the Soviets on nuclear weapons. Britain remained non-committal on its part.

Earlier, in a flamboyant gesture of independence, Mitterrand also turned down Reagan's offer for a seven-nation conference of Western allies before the Geneva arms control summit.

CHINA

RESIGNATIONS EN MASSE

About half of the 24-member Chinese Politburo and one-fifth of the 340-odd Central Committee members and alternates resigned just before the National Party Conference began on Sep 18. The 136 resignations from the Politburo, Central Committee and two party commissions came at the end of the fourth plenary session of the 12th Central Committee meeting which preceded the conference, which is the third of its kind since 1949. The members who resigned included Ye Jianying, Xu Xiangqian, Ulanhu, Wei Guoqing, Wang Zhen and Li Desheng. Among the 10 of the Politburo's 21 members who left was the widow of former PM Zhou Enlai. The other nine had military backgrounds and may have opposed the reforms of Deng Xiaoping, who is leading China through what has been called the 'second Chinese revolution'. Although the resignations did not constitute a purge in the traditional sense, they having been preceded by a four month long nation-wide rejuvenation of government, army and local party posts, the elder statesman Deng's hand was clearly discernable behind the process. Despite the publicity given to rejuvenation, age was not a prerequisite to retirement. While those who resigned from the Politburo were almost all in their seventies and eighties, those who remained like Xiaoping himself, Hu Yaobang, Li Xiannian, were also from the same age bracket. Apparently those who opposed Dengist reforms or were not in favour of the shape that China is taking, are now out.

The National Party Conference was called with two ostensible objectives: to deliberate the draft of the next Five Year Plan (1986-90) and to readjust membership of the leading party bodies in time with the stated rejuvenation policy. On the economic front China unveiled a new five-year economic strategy that would give priority to free-enterprise, technological development and a better standard of living for one billion Chinese. Zhao Ziyang said that the overall strategy for attaining these goals would be to push forward the sweeping market-style economic reforms initiated in China in 1978. He said that emphasis would be placed on improving the operation of large-and-medium-sized state enterprises by making them 'basically independent and responsible for their own profit and loss.'

BADLY TIMED

Can an alarm clock be set at 9.30 p.m. to go off precisely at 12 noon the next day? Well that's no riddle for you to solve, for the catch in the statement is logically apparent.

But not so to Deepak (Karan Razdan), who under the thumbnail of his no-nonsense wife Rajani (Priya Tendulkar) saw to it that the alarm set at 9.30 p.m. went off only at 12 noon the next day (supposedly having slept through the silence of the midnight).

The producers of the consumer-oriented Sunday serial *Rajani* evidently overlooked the glaring flaw in the Oct 13 episode. The ridiculous outcome of humour in a hurry?

In an article in the *People's Daily*, Deng spelled out what he actually wanted for China. He said that China will be socialist and ultimately communist but socialism does not mean poverty. The target is quadrupling the gross national product by the end of the century and to reach the level of the 'First World in 50 years' time. For this, China would have to be opened to international trade and capital investment. Despite some setbacks, especially in the four special economic zones, which constitute the laboratory for China's economic experiments, the country remains committed to Dengist policies.

However, Deng's policies have not been going down well with all sections of his party. At the Central Committee plenum, Chen Yun, a senior party member and veteran economic planner severely criticised the Chinese leader's modernisation programme and blamed it for the country's increasing inflation and depleted foreign currency reserves. Although Chen does not wield as much power as Deng his remarks may signify signs of a split within the party ranks.

NORWAY-SWEDEN

RETURN OF THE DEMOCRATS

The two icy states of Europe, Norway and Sweden held their general elections on Sep 9 and Sep 15 respectively. In Norway, although the centre-right government was not ousted, the Labour Party's gains were significant rising from 37.2% of the votes in 1981 to 40.8% in September. Along with the Left Socialists, Labour holds 77 of the 157 seats in the Storting, the Norwegian Parliament. Kaare Willock's coalition of his own Conservative Party, the Christian People's Party and the Centre Party, holds 78 seats. The anti-tax Progressive Party holds not only the remaining two seats, but also the balance in the Storting. This situation will continue for four years because the Norwegian Constitution does not permit the Storting to be dissolved until it has completed its full term.

In Sweden, Olof Palme's Social Democrats were voted back to power but with a reduced majority. Since 1982, it has ruled with 166 seats in the Parliament to the non-socialists' 163. It now has 159 seats to the non-socialist group's 171 and may have to depend on the votes of the Parliament's 19 communist members. Palme has so far ignored the communists but during this election campaign he claimed that he no longer had any aversion to making deals with the communists on specific issues because their present leader was a revisionist, Lars Wörner. Among the non-socialists, the Centre Party won 44 seats, the Liberals 51 seats and the Moderates 76. The Liberals made the most phenomenal gains, increasing their seats from 21 to 51.

While in Norway, the government will perhaps face problems over defence and foreign policy, Palme's test will come in the field of economic policy. In 1982, he imposed a 16% devaluation which had the immediate impact of stimulating exports, production and investment. But economic forecasters say that Sweden's growth rate will slip down in 1986 to about 1.2%. To control the economy, Palme faces the choice of increasing taxes with the communists or cutting public spending with the non-socialists.

EAST-WEST GERMANY

CORDIAL OVERTURES

The Germans on both sides of the border call it *Sonderverhältnis*: it means a special relationship. This special relationship was strengthened in September when Franz Josef Strauss, the leader of the Bavaria-based Christian Social Union held talks for one hour and a half with east German Communist Party Chief Erich Honecker at Leipzig. Strauss said that the East German leadership wanted to improve relations with West Germany, and that Honecker had promised some human rights concessions. This would include an extension of eligibility for exit permits. At present, the immediate family members of a West German resident are allowed to leave the country. Now other relatives like aunts and uncles will also be allowed to join their relatives abroad. Honecker also promised to relax the 'ban on contacts' which forbids members of the East German police, military and security services from having any 'contact' with the West. He also reportedly assured Strauss that minefields along the 835 mile inner German border would be dug up and removed.

Honecker stated that there was 'very great optimism' for the future and was told that the invitation to visit West Germany, which he was forced to cancel last year under Soviet pressure, still stands. The relationship between the two countries has become warmer despite the spy scandals which have rocked Bonn. Economic relations, too, are

SPORTS

(Continued from page 58)

1-6, 1-6, 7-6. **Doubles:** Claudia Kohde-Kilsch (W. Germany) & Helena Sukova (Czech) b Martina and Pam Shriver (USA) 6-7, 6-2, 6-3. **Mixed doubles:** Heinz Gunthardt (Switzerland) and Martina b John Fitzgerald and Elisabeth Smylie (Australia) 6-3, 6-4. **SANJEEV GUPTA**

NEHRU HOCKEY TOURNAMENT

Within the short span of two decades, the Jawaharlal Nehru hockey tournament conducted annually in Delhi has become a byword for the promotion of the game in India. The tournament was started in December 1964 with multiple purposes—to perpetuate the name of India's first PM who died in May that year; to popularise hockey and locate talent; and to provide regular and intensive competition for India's leading hockey club and institutional teams. To achieve these objectives, a Jawaharlal Nehru Hockey Tournament Society was set up with the President of India as its Patron-in-Chief.

The Nehru hockey tournament has started new trends in Indian hockey. Since 1965 foreign teams have been annually invited.

The most unique contribution of this tournament was the introduction in 1972 of an all India school tournament known as the Junior Nehru hockey tournament—for boys under 17 years—which precedes the senior championship. Annually 32 to 35 teams participate. Not content to rest on their laurels, the tournament society has since 1979 been organising a summer coaching camp for about 60 talented players spotted in the Junior Nehru tournament. Six camps have been held so far four in Delhi, one each in Srinagar and Mercara (Karnataka). This follow-up action, sponsored by some private sector companies is very beneficial as many of the Indian junior hockey team players in the 1980s were initially nurtured in these summer camps. Prominent coaches from the NIS Patiala are appointed each year to impart training to the talented juniors. The 12 most talented junior hockey players are also awarded annual scholarships.

After the junior tournament started paying dividends, the society felt that hockey should be promoted at the grassroots level in the country. To achieve this objective a sub-junior tournament for boys under 15 years was started since 1983. In this tournament every state and Union territory through their Directorate of

Education is invited to send its best team after holding broad-based contests at the district and state level. This venture has been launched due to the generosity of TISCO which contributed Rs 5 lakhs for this purpose.

So the Nehru hockey tournament are the premier hockey promoters in the country as they alone annually organise championships at the senior level and for boys under 15 and under 17 years. Indian Airlines are the current holders of the Nehru hockey tournament having beaten BSF 3-2 in the final last year. However, BSF and Northern Railway have the best record in the tournament having won it four times each.

NOVY KAPADIA

ROVERS CUP

The Rovers Cup football tournament held annually in Bombay is the second oldest football tournament in the country. It commenced way back in 1891, just three years after the **Durand Cup**. However, unlike the Durand, the Rovers Cup has always been staged in Bombay. The tournament is organised by the Western India Football Association (WIFA) and along with the Durand, **IFA Shield, DCM and Federation Cup**, is the most prestigious soccer tournament in India.

The exact origins of the Rovers Cup are unknown. Some British soccer enthusiasts started the Rovers Cup, naming it after their club which bore the same name. Initially the tournament was confined to British regimental teams. Mohun Bagan were the first civilian team to be invited in 1923. In their first appearance in the tournament they reached the final but lost to Durham Light Infantry 1-4.

Bangalore Muslims were the first Indian team to win this trophy in 1937 when they beat Calcutta's famed Mohammedan Sporting 1-0 in the final. Hyderabad City Police later known as Andhra Pradesh Police have the unique distinction of entering the Rovers Cup final on nine occasions and winning on all nine occasions. They are also the only team to win a major-knock-out competition in India for five years in a row having annexed the Rovers Cup from 1950-54. Mohun Bagan have the best record in the Rovers Cup having entered the final on 18 occasions, the maximum by any team, and have emerged winners nine-times and runners-up nine times.

Coach of Delhi Sub-junior football team, coach-cum-captain of a first division Delhi football league club, teaching in University of Delhi.

Since 1982 the format of the tournament has been altered. There is a preliminary phase from which teams qualify for the tournament proper to which entry is restricted to only the best teams of India.

The holders of the 1984 Rovers Cup are Mohammedan Sporting which beat JCT Mills (Phagwara) 1-0 in the final. **N.K.**

SIXTH HIMALAYAN CAR RALLY

The sixth Himalayan Car Rally is important for more than one reason. It is not only going to be the most spectacular of the competitions held so far, it also stands a chance to be accorded a world championship event status. The organisers expect more than 100 Indian and foreign cars to participate.

This year, the Federation Internationale du Sport Automobile has deputed two observers to make their assessment of the organisational part of the rally. A good report from these observers would mean the Himalayan Car Rally getting a world championship status. The elevation to world status of this rally would give a new fillip to car racing and the automobile industry in India.

The fifth Himalayan Car Rally was terminated last year after it had successfully completed the first two legs, which involved driving 1,931 km, following PM Indira Gandhi's assassination. Kenya's Jayant Shah, who had won the rally in 1983 too, had been leading with 117 penalty points when the rally was terminated. He was declared the winner though no prize-giving ceremony was held. The rally provides stiff competition to the participants and stretches to 3,800 km of skillful driving through over 10,000 ft high Himalayan passes, rivers, forests and rough land. The cars take off at a pre-scheduled time at fixed intervals. The rally goes through one competition to another and one checkpoint to another. The time for this is set by the organisers to help the drivers attain high average speed regardless of the area through which they pass. Late arrivals at every checkpoint are given penalty points. The winner is adjudged by the least number of penalty points. Apart from the adventure and skill, an important aspect of the rally is the support given to the participants by mobile service crews. The mobile service crew travel in special cars that are equipped with modern equipment. The rally car is allowed to accommodate only the driver and a specialist navigator-cum-driver to help in emergency. Both are normally supposed to be good mechanics too. **V.L.**

flourishing. In 1984, East Germany accepted a \$351m loan from the Federal Republic and it also allowed 35,000 East Germans to emigrate to the West. During the first half of this year, East Berlin imported \$1.24b worth of West German goods, while its exports to the same country dropped by 2% to \$1.19b. This suggests that East Berlin's balance of payment deficit would be financed by a special West German credit arrangement with East Berlin, known as 'the swing.' However, much depends on the outcome of the Reagan-Gorbachov summit.

MIDDLE-EAST

USING BRUTE FORCE

Terrorism made its appearance again in the Middle-East when four Palestinian gunmen belonging to the Front for the Liberation of Palestine (FLP) hijacked an Italian luxury ship *Achille Lauro*, near Alexandria, Egypt, held 420 passengers, mostly crewmen, as hostages

and even executed an American passenger to demand the release of 50 Palestinians from Israeli jails.

After 48 hours of negotiations in which a leading role was played by Egypt, Italy and the Palestine Liberation Organisation (PLO), the hijackers surrendered. The PLO had earlier denied any involvement in the incident and states that it had been staged to undermine the worldwide sympathy for them after the Israeli air-raid.

The hijacking ordeal was brought to an end after Egypt conceded three demands of the hijackers—a talk with the US and Israel for the release of Palestinian prisoners, a guarantee that they would not be tried and also would not be handed over to the PLO.

The incident, however, did not end there. The Egyptian airliner carrying the hijackers was intercepted by American F-16 warplanes and forced to land at Sicily airport. Meanwhile the PLO gunman are lodged in Italian high security prisons. **SANJUKIA BANERJI & A. N.**

THE FREEDOM MOVEMENT-2

PERSONALITIES

BY R.C. THAPER
University of Delhi

Allan Octavian Hume (1829-1912): Founder and first General Secretary of the Indian National Congress; retired member of the Indian Civil Service; a great sympathiser of the Indian people; propagated the Congress ideals in England.

Dadabhai Naoroji (1825-1917): "Grand Old Man of India"; a prominent leader of the Congress in its early years and served it till the end of his life; worked for attainment of Swaraj; believed that the British nation was essentially just and ready to redress grievances if acquainted with the true state of Indian affairs; made England the centre of his political activities; author of a monumental work *Poverty And Un-British Rule In India* wherein he put forward the drain theory—the whole gamut of financial, civil and military set-up was geared towards setting up a mechanism which extorted resources from the Indian economy for the benefit of the British economy.

Surendranath Banerji (1848-1925): The "Indian Demosthenes"; passed the Indian Civil Service in 1869 but was dismissed for a minor irregularity; then established the well-known Rippon college of which he was the Principal for a number of years; founded *Bengali*, a daily English newspaper and edited it; became President of the Congress twice—1895 and 1902; achieved all-India fame when he led the anti-partition agitation in 1905.

Gopal Krishna Gokhale (1866-1915): Started his life as a Maths teacher and soon became Principal of Fergusson College, Pune; played a commendable role in the Imperial Legislative Council, to which he was elected in 1902; founded the Servants of India Society.

Raj Gopalachari (1856-1940): "The father of Indian unrest"; took his degree in Law in 1879; started two well-known papers—*Kesari* and *Marhatta*; political career began in earnest when famine broke out in the Deccan in 1896. He and his followers explained to the people the relevant sections of the Famine Relief Code and encouraged them to be bold and fearless in demanding their rights. Utilised the Indian religious instinct and historical traditions to develop patriotism and nationalism. Inaugurated the *Garpati* festival in 1893 and *Shivaji* festival in 1895; through his scholarly work *Gita Rahasya*, he taught the people to fight against oppression and unrighteousness. Achieved all-India fame following the Partition of Bengal. The man who bravely said: "Swaraj is my birth right and I shall have it." Believed in 'militancy and not mendicancy'.

Lala Lajpat Rai (1865-1928): A great leader, a dedicated social worker and an educationist of distinction. Joined the Indian National Congress at the Allahabad session (1888). Joined the Extremists in the 1907 Congress split and chose to work with Tilak. Started a newspaper, *Young India*. Presided over the Congress session in 1920. Became a member of the Indian Legislative Assembly in

1923 and worked for some time as Deputy Leader of the Swaraj Party. Led the boycott demonstration against Simon Commission in 1928; was violently assaulted in the lathi charge and died a martyr. A great orator in Urdu and also a writer of distinction.

Bipan Chandra Pal (1858-1932): One of the eminent extremist leaders of the early 20th century. An ardent supporter of boycott, swadeshi and national education. Did not believe in Dominion Status and wanted full-fledged independence. Rose into prominence after the Partition of Bengal. In the 1907 Surat Congress session, he fought for Tilak's candidature for presidency. Parted company with the Congress and extremism in the last few years of his life.

Mrs Annie Besant (1847-1933): The Grand Old Lady of Indian nationalism. Joined Theosophical Society in 1889 and became its President in 1907. Settled in India in 1893. Worked for the social and educational uplift of India. Translated the *Bhagwat Gita* into English. Joined the Congress as she felt there could not be real progress in social and educational fields without elevating India's political status. In 1916, inaugurated all India Home Rule League in Madras. Played an important role in uniting Moderates and Extremists at the Congress Session in Lucknow. In 1920, left the Congress but continued to serve India till her death.

C.R. Das (1870-1925): Popularly known as 'Deshbandhu'. Had a thriving practice at the Calcutta Bar when he entered politics in the 1920s. Boldly, criticised Gandhi for suspending the 1922 civil disobedience movement. His views were appreciated at the Gaya Congress session, which he presided; resigned due to Rajgopalachari's opposition. Subsequently, he along with Motilal Nehru and Hakim Ajmal Khan, founded the Swaraj Party.

Motilal Nehru (1861-1931): A famous national leader of the Gandhian era; a prosperous lawyer of the Allahabad High Court; became a member of the Home Rule League in 1917. Founded Swaraj Party and was its central figure. Became Congress President in 1930. Donated his palatial houses 'Anand Bhawan' (later known as Swaraj Bhawan—Abode of Freedom) to Congress. He was the father of Jawaharlal Nehru.

Pandit Madan Mohan Malaviya (1861-1946): One of the most respected nationalists in India. Joined the Congress in 1886 and remained its member till the end of his life, though at times protested against its policies and programmes. Twice elected President of the Congress. An orthodox Hindu, he was elected thrice as President of the Hindu, Mahasabha; represented the Hindu community of India at the Round Table Conference. Founded the Nationalist Party with the primary objective of protecting the interests of Hindus. Also a journalist and a great social worker.

Subhas Chandra Bose (1897-1945): Affectionately remembered as 'Netaji' by his

countrymen. Resigned from the Indian Civil Service in 1921 to join Gandhi's campaign of non-cooperation. Did not agree with Gandhi on political questions of the day. Worked in Congress from 1921 to 1939; elected President of the Congress in 1938, but soon came into conflict with the Congress high command. In 1939, left Congress and formed another party, Forward Block. When World War II broke out, he was arrested, but escaped from India and reached Japan; formed an Indian National Army (INA) to fight the British, but was unsuccessful due to Japan's surrender. Believed to have died in an air crash in 1945. It was his desire to unfurl the national flag at Red Fort in Delhi. Every year on Aug 15 the national flag is unfurled there in deference to his wishes. His slogan of 'Jai Hind' is on the lips of millions of Indians.

Mahatma Gandhi (1869-1948): Mohandas Karam Chand Gandhi known as 'Father of the Nation'. He was the greatest son of modern India. He was a great Indian patriot, social reformer and moral teacher. He believed in non-violence. He led many movements in India to secure India's independence. He was in favour of democratic and united India. He led the Indian National Movement from 1920 onwards till 1947 when India became free. He was assassinated in 1948 when India became free. He worked for Hindu-Muslim unity and for the uplift of Harijans and women.

Sardar Vallabhbhai Patel (1875-1950): Known as the Iron Man of India; a native of Gujarat, he was a very able Home Minister in the first cabinet of independent India. In achieving the integration of the Indian states, he demonstrated his formidable political acumen.

Maulana Abdul Kalam Azad (1888-1958): A great nationalist who believed in communal harmony; elected President of the Indian National Congress in 1923. A colleague and associate of Mahatma Gandhi. Remained Union Minister for Education from January 1947 till his death on Feb 22, 1958.

Dr Rajinder Prasad (1884-1963): Joined the Congress in 1911. Edited a new Hindi weekly called *Desh* in order to reach the masses when the Congress, after its 1920 Nagpur session, changed the whole base of Indian politics by deciding to involve the masses in the freedom struggle. Allotted the portfolio of Food and Agriculture in the Interim Ministry. Unanimously elected as President of the Constituent Assembly in 1947. President of the Union from 1952 to 1962.

Jawaharlal Nehru (1889-1964): Laid the foundation of modern, industrial India. Architect of the policy of non-alignment. India's PM from 1946 till his death in 1964. A leading member of the Indian National Congress; presided over many of its sessions. His Presidency of 1929 Lahore Congress when complete independence was declared to be the aim of Congress, is especially important and historic.

CAREER NEWS

Banker's Choice

How would you like to be a banker dealing with crisp and soggy notes all day long, fixing people's fat deposits or helping enterprising young entrepreneurs with loans? Sounds exciting, doesn't it? Well, a whole lot of openings have been announced by the Banking Services Recruitment Board (BSRB).

If you have a degree from a recognised university or any equivalent qualification recognised as such by the Government of India you may try your luck as a Probationary Officer (PO). The BSRB (Western Group Bombay), has announced 300 vacancies for POs. It has also announced 525 posts of Agricultural Finance Officers/Rural Development Officers for which one needs to have a degree in Agriculture/Agricultural Engineering/Animal Husbandry/Horticulture/Veterinary Science/Dairy Science/Fisheries Science or Agricultural Marketing and Cooperation.

Written exams will be held for the two posts on Dec 29, 1985 and Jan 19, 1986 respectively. For details please see *The Hindustan Times*, Oct 8, 1985.

You also have the choice of Management Trainee/PO with the BSRB (Delhi) which invites applications from Indian citizens for 200 appointments in the Punjab National Bank. Of course, you will have to qualify a written exam to be held on Dec 29, 1985. For other details

and application format please look up *The Hindustan Times*, Oct 8, 1985.

The Central Recruitment Board (State Bank Group) has 374 vacancies to be filled up by POs, in the Associate Banks of SBI, the written exam for which will be held on Dec 22, 1985. Look up *The Times Of India* dated Oct 3, 1985 for other details and application format.

A variety of posts in the officers' cadre, in the Central Bank of India have also fallen vacant. The BSRB (Central Group) invites applications for POs (75), Assistant Security Officers (28) and Vigilance/Investigating Officers (5). The common written exam for all the above posts will be conducted on Dec 15, 1985. Please see *The Times Of India*, dated Oct 9, 1985, for application format and other details.

The BSRB (Southern Region) also invites application for the posts of 230 POs to be appointed in Canara Bank, Syndicate Bank,

A Bumper Offer To Bank On

The December 1985 issue of *CCTimes* is being brought out with the future bank officer in mind. If you are one, be on the look out for the issue with exhaustive objective-type questions consisting of Test of Reasoning, Quantitative Aptitude, General Awareness and a detailed feature based on descriptive questions for the English paper—all carefully compiled for your positive success in the forthcoming bank exams.

Corporation Bank and Vijaya Bank. Though these vacancies are likely to arise only during 1986-87, the written test will be held on Dec 15, 1985. For application format and other details, see *The Times Of India* of Oct 9.

Postponements

The Civil Services (Main) Exam 1985 will commence on Nov 22, 1985 instead of Nov 1, 1985.

The Section Officers/Stenographer's (Grade 'B' Grade I) limited departmental competitive exam 1985, earlier scheduled to commence on Dec 10, 1985 will now commence on Dec 18, 1985.

Overseas Scholarships

The Ministry of Home Affairs will award nine Passage Grants and 29 National Overseas Scholarships for higher studies abroad for SC/ST students for the year 1985-86. For application forms, which will be supplied by post only, please write enclosing a crossed IPO for Re 1 alongwith a self-addressed, stamped envelope (28 cm X 12 cm) to: The Deputy Secretary, Ministry of Home Affairs, Protection of Civil Rights Cell, Room No. 240, A-Wing, Shastri Bhavan, New Delhi-110 001. The IPO should be drawn in favour of the Secretary, Ministry of Home Affairs, New Delhi.

Applications will be supplied by post only upto Dec 15, 1985, and the last date for receipt of completed applications is Dec 30, 1985. For more details please see *Employment News* of Oct 5, 1985.

Answers to

TEST YOUR WORD POWER

- binary:** B: of or involving a pair or pairs characterised by two. Based on nothing more than a combination and permutation of two binary digits—zero and one—the computer is the workhorse of 20 men.
- caricature:** A: to represent so as to make ridiculous. The Japanese have always been easy to caricature, from the samurai warriors of old to the subhuman sadists of wartime propaganda and today's supposed economic animals.
- dispel:** A: to clear; disperse; drive away by scattering. Since AIDS was first recognised in 1981, researchers have been able to dispel many early misconceptions—for instance, that it might be spread by casual contact with an infected person.
- emblazon:** A: to adorn richly, especially heraldically. For millions of Japanese, Aug 6, 1945 is forever emblazoned in memory.
- endorse:** A: to approve; confirm; support a claim, statement, etc. In recent weeks French politicians of all stripes, except the beleaguered communists, have endorsed the notion of defending West Germany if war breaks out.
- forlorn:** C: forsaken; uncared for; desolate; miserable; wretched. Once Cologne was a jewel of medieval Europe; now much of the city (pop. 997,000) is a hodgepodge of forlorn apartment blocks and vacant lots.
- fountainhead:** C: original source. Cologne is a fountainhead of civilisation that has started to spout again.
- hideous:** B: very ugly; frightful; repulsive. During dictator Joseph Stalin's "Hate America" campaign of the early 1950s, Kremlin artists depicted US soldiers as hideous, spider-like creatures, armed with spray guns and injection needles, demonically waging germ warfare.
- indignation:** C: anger caused by injustice, misconduct, etc. Few consumer issues apart from the transport services, arouse such helpless, seething indignation as the vagaries of Indian Telephones.
- juxtapose:** A: to place side by side. In *Kiss Of The Spider Woman*, filmed in English from the novel by the Argentine Manuel Puig, Hector Babenco has folded his social concerns into a more

complex and deliberately stylised film, in which politics are juxtaposed with the magic of movies themselves.

- monastery:** D: a place where monks live in seclusion. Driven out of Constantinople by the Turks, an Armenian abbot named Mekhitar arrived in Venice in 1717 and set about converting a dilapidated island leprosarium into a monastery.
- morass:** D: anything that perplexes, as a difficult situation; marsh. The International Monetary Fund (IMF) has a standard recipe for developing nations struggling to climb out of the morass of foreign indebtedness: austerity.
- neurosis:** D: nervous disease; a functional nervous disorder. Impostor phenomenon, a neurosis that affects only those who have achieved success, is a peculiar blend of insecurities.
- nonchalance:** C: unconcern; indifference. Despite President Reagan's nonchalance, Americans seem somewhat concerned about his health though not overly so.
- notch:** A: to achieve; score. By 1990, the computer industry will notch up world sales of one trillion dollars.
- propitiate:** A: to appease; pacify; with the favour or support of The life in R.K. Narayan's stories consists largely of people doing just what they and their ancestors have been doing for hundreds of years—they propitiate the gods as best they can.
- scribe:** C: writer; copyist; professional letterwriting. Mahabharata is a heroic narrative about two warring families, written in Sanskrit by a series of anonymous scribes over eight centuries.
- swap:** A: to exchange; barter. Six years after the Shah's ouster, it would appear that Iran has swapped one set of constraints on personal freedom for another.
- toll:** D: a grievous or ruinous price, especially, cost in life or health. While AIDS' toll of fatalities remains relatively small, it is cutting a psychological and social swath far wider than its numbers.
- tribulation:** A: grief; misery; trouble. The telephone subscribers' saga of tribulations is endless: excessive billing, arbitrary disconnection, dead phones for lengthy periods.

Vocabulary Ratings:

- 20-18 correct..... exceptional
17-15 correct..... excellent
14-12 correct..... good

COURTS vs LEGISLATURES

BY P. M. BAKSHI

The Constitution of a country mainly deals with the distribution and exercise of sovereignty within the State. There are several modes of distribution of sovereign powers. It may be distributed vertically, as between the Centre and the states. Or, it may be distributed horizontally, as between the three main organs of the State, i.e., the Legislature, the Executive and the Judiciary. The Constitution-makers tried to effect this distribution of powers so as to clearly demarcate the functions of the three organs. Nevertheless, in practice, there do arise occasions when the exercise of powers by one organ is questioned by another. Such a conflict of jurisdiction leads to delicate situations in some cases.

Precisely such a situation arose in Tamil Nadu recently, when the state Legislative Assembly in exercise of its jurisdiction under the Constitution, held the editor of a newspaper guilty of "contempt" of the state Legislature and condemned him to imprisonment for "breach of privilege". The action of the state Legislature was challenged in the High Court, on the ground of violation of the editor's Fundamental Rights. Still more recently, a legal tussle has arisen between the Legislative Assembly and the High Court in J & K.

What is important in such cases is the constitutional background against which the particular controversy has arisen, and the legal issues that emerge out of such controversies. The above subject is covered under parliamentary privilege and the precise question to be considered is how far it is subject to the jurisdiction of courts.

Legislative Powers

The function of the Legislature is to make laws, to hold the Executive accountable for its political acts and to approve of the budget. In order to enable the Legislature to perform its functions independently and effectively, the Constitution confers certain powers, immunities and privileges on the Legislature both at the Centre and in the states. Art 105 and Art 194 of the Constitution deal with the powers and privileges of the Central and state legislatures respectively.

One of the well-recognised privileges of Legislature is its right to punish a person who acts in a manner which is offensive to the dignity of the House, or obstructs its proceedings, or intimidates its members or officers, or casts reflections on their conduct or otherwise commits a "contempt" of the House. The punishment to be awarded by the House for such misconduct

may be admonition, reprimand and imprisonment. Admonition and reprimand are effected by merely calling the guilty person to the "bar" of the House and condemning his conduct. A Committee of Privileges constituted by the House holds an inquiry into the alleged misconduct and submits reports to the House, which then gives its ruling as to the guilt and punishment to be meted out.

Powers Of Courts

What happens when the action taken, or proposed to be taken by the House is challenged before a court of law?

In this context, it may be recalled that the Indian Constitution vests—(i) in the Supreme Court, a power to issue writs for the enforcement of Fundamental Rights (Art 32) and; (ii) in each High Court, a power to issue writs for the enforcement of Fundamental Rights and for other purposes.

Thus, if the allegation is that the Freedom of Speech, guaranteed under Art 19 (1) (a) of the Constitution, is violated by the proposal of the House in a particular case to punish a person who has written an article or made a speech amounting to "contempt" of the House, the Supreme Court must at least look into the matter. This applies to the High Court also. Besides this, if a person is arrested he may approach the Courts for protection of his right to "personal liberty". (Art 20 and 21)

Conflicts

Such proceedings naturally lead to the question of the existence of the privileges of the House. The situation obviously leaves scope for conflict between the House and the Courts. It may be repeated that the constitutional provisions as to privileges of Parliament and state Legislature do not enumerate or state the Privileges. So no one can pin-point the extent to which parliamentary privileges can be exercised.

Judicial Principles

The matter has received attention in the Supreme Court more than once. Initially the Court held that the action of the Legislature cannot be challenged on the ground of violation of either Freedom of Speech (Art 19 (1) (a)) or of Personal Liberty (Art 20-21) *Sharma Vs. Sri Krishna*, AIR, 1959 SC 395. However, in a subsequent decision, the Supreme Court held that violation of Personal Liberty could be inquired into by the Court. If the person is arrested for something said or done outside the House (Art 143 and AIR 1965 SC

745).

In general, the courts have taken the view that the question whether a particular privilege exists can be looked into by the courts in writ petitions challenging legislative rulings or privileges. But if the privilege claimed is found to exist, then the mode of its exercise will neither be investigated into nor debated before the courts.

Illustrative cases

The nature of conflicts that arise between the courts and the Legislatures in this sphere can be well-illustrated by taking up two actual cases which came up before courts.

(i) A journalist published certain portions of the proceedings of the Bihar Legislature, although the House had expunged those parts. He was served with a notice issued by the House. The notice laid the charge that he had infringed the privilege of the House by publishing expunged portions of its proceedings. The notice called upon him to show cause why appropriate action should not be taken against him. The journalist moved before the Supreme Court a petition under Art 32 of the Constitution asserting that his right to Freedom of Expression had been infringed by the threatened action. The Supreme Court, however, dismissed the petition and held that the action of the Bihar Legislature, which had been taken by virtue of a power directly conferred by the Constitution (Art 194) was not subject to challenge under Art 19 (1) (a) of the Constitution (Freedom of Speech). The British House of Commons possessed the absolute power of prohibiting the publication of proceedings, and the Bihar Legislature was exercising only that well-recognised power under Art 194(3) of the Constitution. The position would be different if a law is made by the Bihar Legislature, defining or codifying its privileges (*Sharma Vs. Sri Krishna* AIR, 1959 SC 395)

(ii) The latest case of conflict comes from J & K. The Legislative Assembly in J & K on Sep 3, 1985 took a stand (by majority) that the House was supreme and the Assembly would not follow the High Court's direction to the Speaker's counsel to produce relevant proceedings of the House of Aug 17, when three Opposition members were suspended for the rest of the session (Press Reports, Sep 4, 1985). The members moved the High Court for interim stay of Suspension order but the Assembly refused to comply with the stay.

The above illustrative cases show that so long as the present position continues the scope for conflict is unavoidable. Nevertheless, if the privileges of the Parliament and state Legislatures are codified by legislation, the scope of controversy may get reduced ■

Essay Contest Results

"INDIAN NATIONAL CONGRESS: GAINS AND LOSSES"

The Indian National Congress has just completed its centenary celebrations and has faced many highs and lows in its hundred-year chequered history—a history which is closely interlinked to the history of India itself.

The Congress has many gains and losses to its credit now. *CCTimes* announced an essay competition on 'Indian National Congress—Gains and Losses' in August 1985. The response from the readers was overwhelming. From the wide range of interesting entries received, here are excerpts from the best three.

Congratulations to the winners from *CCTimes* and for the others its better luck next time!

"Within ear-shot of its centennial year, the old Indian National Congress may either rise as the phoenix from its ashes or forever be forgotten," said M.V. Kamath in *Debonair* early in 1984. Now that the much-awaited year has arrived, the debate is still on whether the 'old' Congress deserves an eulogy or an elegy. One thing, however, is clear—the Congress, as it is today, can either be praised or criticised—it just cannot be ignored. It was and is an inextricable part of India.

Few parties can equal the awe-inspiring record of the Congress. Gautam Adhikari in *The Times Of India* rightly divides its history into eight phases—each with its own gains and losses. Starting as 'the Kumbh-mela of the educated' (1885-1905), it graduated to extremism (1905-20) under Bal, Lal and Pal and became, under Mahatma Gandhi, the party of the masses, by the masses and for the masses (1920-47). Resisting Gandhi's suggestion of liquidation after independence, the fighter for freedom became the ruler of a nation under Nehru (1947-64). The next few years (1964-69) were the hey-days of the 'syndicate' which lost out to Mrs Gandhi after the legendary split. The age of 'Indira is India' was followed by the age of Sanjay Gandhi and his cronies. And now, it's over to Rajiv Gandhi and his 'computer boys'.

However, the party has won many a laurel for itself and the country. In the turbulent pre-independence era, it was the Congress that made a tryst with destiny and tackled the most complex divorce in history—the partition.

The feathers in the Congress cap are truly numerous. Yet, it was this very Con-

gress of which Nehru remarked as early as in 1949—"The Congress is simply fading before my eyes... There is no sense of discipline left, no sense of common effort, no cooperation, no attempt at constructive effort..." The emergency imposed by Mrs Gandhi left poignant memories. More recent and more revealing are the wanton loot and licentiousness the students' wing of the party indulged in its Nagpur session.

A corrupt and red-taped bureaucracy, a politicised army, a committed judiciary and a lumpenised system are but a few contributions of the Congress. Add to this the Presidentialisation of the office of Prime Minister, the gradual erosion of state autonomy, the cult of sycophancy and the use of money power, media power, muscle power and ministerial power in elections and the picture is complete.

However, the Congress alone cannot be blamed for its blemishes and blunders. As Acton says—"Power corrupts and absolute power corrupts absolutely." Laxity of public opinion and the virtual absence of an Opposition has made Congress the giant of Indian politics. Thus, if the Indian democracy is to breathe and bloom, eternal vigilance and a strong Opposition are absolutely essential. As for the Congress itself, its members have eulogised, romanticised and 'mythologised' it long enough. Hats off to the Congress plan of cleaning the administration, but charity should begin at home.

First Prize: Rs 150

Mahima Saxena, Jaipur

The Congress Party has undergone many transformations during its century-old history. It started as a forum for educated, middle-class interests to demand participation of Indians in the administration. The party had a democratic leadership with decisions based on consensus and tolerance of dissent. This was evident from the presence of both the moderate and extremist factions within its fold. But the difference in aims and methods were reconciled by the selfless, dedicated and enlightened leadership in working for the goal of independence.

The gains made by the Congress include the salient one of leading the country to independence. It has provided India with a stable leadership during the post-independence era. Democracy has taken strong roots in the country. India remains a secular state, dedicated to the socialist path of development. The country

has achieved self-sufficiency in food production and is one of the leading industrialised nations.

The losses suffered by the Congress include the growth of corruption, violence and communalism in politics. The leadership has become more and more centralised and authoritarian in nature. There is increasing intolerance towards the Opposition. There is growing suppression of dissent within the party. Instead of clear, well-defined principles, reliance is placed on populist slogans, gimmicks and propaganda to win elections. The greatest decline is in terms of motivated, committed and selfless leaders....

Thus, though the Congress has succeeded in maintaining the democratic polity of a united and integrated country, it has been at the cost of centralising the quasi-federal structure, leading to the growth of discontent, communalism and violence in the country.

Second Prize: Rs 100

Jai Raj Kumar, Delhi

In 1985, the hundred-year-old Indian National Congress has been able to build up a monolith in a country which boasts of a multi-party system. It is time to take a look at the balance-sheet of the party which, to a great extent, has determined the destiny of India.

Established at the insistence of Viceroy Lord Dufferin, it was destined to be the party which would lead India to independence only 62 years after its foundation. The Indians were seeking to relieve the Britishers of 'the white man's burden' and the Congress was their mouthpiece. The party was distinguished for its leaders who never tried to project themselves as supreme powers. It is true that at one time or the other leaders like Gandhi became indispensable for the Congress. But who had heard of slogans like 'Mahatma is Congress' and 'Congress is Mahatma' at that time?

...In the post-independence period, the country continued to gain through the Congress.

However, a subtle change was taking place on the Indian political scene at this time. Hypocrisy, sycophancy, selfishness and corruption were gradually increasing among the Indian politicians. The Congress politicians were not immune to this. Today, this negative trend has reached its culmination. The Congress Party which continues to rule India with only one short interruption, has not been able to get rid of self-seeking politicians....

In spite of all odds, the Congress has managed to stay in power. Unfortunately, this very political reality has become a potent cause for the pollution of the party.

Third Prize: Rs 75

Dipankar Sinha, Calcutta

PERSONALITY DEVELOPMENT

Preparing For An Interview-3

BY PRABHA GOPAL

High qualifications and intellectual ability are not necessarily two sides of the same coin. In fact, a person with an average percentage of marks and fewer degrees to boast of may prove to be more intelligent and capable in the practical application of his knowledge—both in everyday life and at his place of work.

No wonder reputed employers today judge a candidate's basic understanding of his subject of specialisation rather than assess him on the basis of his decorative degrees or a stunningly-high percentage of marks. What with academic standards varying from one educational institution to another, employers are being doubly careful in testing the candidate's mental faculties so as to judge whether education has actually disciplined his mind to think correctly, consistently and logically.

Know Your Basics

The initial part of this take-off stage of the interview comprises questions on the basics of the candidate's subject of study. A student of Economics may, for example, be asked as follows:

"Could you explain to a layman, in simple words, what is Economics?"

"Economics is a social science concerned chiefly with the way society chooses to employ its limited resources, which have alternative uses, to produce goods and services for present and future consumption."

"What is direct tax?"

"A tax that is not shifted—that is, its burden is borne by the persons or firms originally taxed. Income-tax, for example, is a direct tax."

"What is liquidity?"

"Ease with which an asset can be converted into cash quickly without loss of value in terms of money."

If it is an interview for a bank job the interviewer may continue as follows:

"What do you know about the World Bank?"

"It is an international bank which finances basic development projects such as dams, communication and transportation facilities. It was established by the UN in 1945 to provide loans for postwar reconstruction and to promote development of less developed countries."

Again, a Political Science student, for example, may be questioned on his understanding of concepts like the state, sovereignty and the government. The answers are expected to be short and precise, as follows:

"State is an assemblage of human

beings, occupying a definite territory, organised under a government and subject to no outside control."

"Sovereignty implies a state with internal authority which is supreme and independent of all external control."

"The government is an agent of the state which is entrusted with the task of making laws for its proper governance."

A board member may also test the candidate's knowledge of constitutional provisions by posing the question:

"What is your understanding of the role of state governors in India?"

"The Governor is appointed by the President on the advice of the Central Cabinet. He is the agent of the Centre who sees to it that the state government functions within the framework of the Constitution. The governor also has a number of discretionary powers under Art 356 according to which he can report to the President that the constitutional machinery of the state has broken down. In such cases the Governor can suggest imposition of President's rule in the state. However, in the last three decades, the role of governors has been the subject of major controversy in West Bengal and Andhra Pradesh where the governors have served as tools of the Central ruling party."

Knowledge Application

Book knowledge is no knowledge unless a candidate has the ability to utilise what he has learnt. In this part of the interview the candidate may be tested as follows:

"How will your knowledge of chemistry help you in your administrative career?"

"Chemistry may not directly help me in my career. But the scientific approach I have developed will be of much help to me wherever I go."

A candidate being interviewed for a technical post, say in an atomic power plant, may be asked about the direct application of his scientific knowledge in his field of work.

"As a student of Physics can you tell us what you understand by a reactor going critical?"

"The moment an atomic reactor starts functioning and produces nuclear energy it is said to have become critical."

"Can you tell us what is a fast reactor?"

"A nuclear reactor in which little or no moderator is used is called a fast reactor. Here the fission is caused by fast neutrons."

Local Problems

At the final stage, candidates are tested not only on their knowledge of national or

international issues but also on their awareness of local problems. For example, a candidate from Tamil Nadu may be questioned on the age-old language problem.

"Do you think that the allegation of the DMK party that Hindi is being imposed upon them, indirectly, through TV serials is justified?"

"Well, I personally feel that it is justified to a certain extent. The new relay centres whether in southern India or in eastern India are hooked up by the national network and hence people are forced to watch the Hindi programmes relayed from Delhi. But a person living in a small town, in the south for example, would feel at home watching programmes in his regional language rather than watching a Hindi programme."

"Can you offer a solution to the language problem?"

"Since English is an international language, it would be more appropriate to use it as a link language within the country. English will be more easily accepted by a majority of Indians as compared to any Indian language, including Hindi, which is considered a language of the Hindi-speaking states in India. The regional languages can continue to be used within the state and the combined use of English will facilitate day to day functioning."

Similar questions on the candidates' in-depth knowledge of local problems will take the candidate to the final winding-up stage of the interview. However, the interviewers would have almost made their choice by now and the final winding-up stage would be more often a test of the versatility of a candidate and his ability to undertake additional responsibilities in an organisation.

(To be concluded)

ESPECIALLY YOUR S, ENGLISH

Timely help is CCTimer's top priority, particularly if it concerns the future career of young men and women. And with the bank exams just round the corner we were contemplating to bring out an English Special based on the questions posed in these exams.

How would you accept the idea? Would you welcome it? Or would it not make much difference to you? Please hurriedly write to us before Nov 7, 1985, so that we would get into action if most of you favour the idea.

CIVIL SERVICES (MAINS)

(Continued from page 19)

- Regulation of pesticides and insecticides used for agriculture so that the surface run-off from cultivated areas does not flood these chemicals into the river.

- Attempts will be made to raise the purity level of the water to make it uniformly drinkable.

The Ganga Action Plan also outlines a scheme for energy generation whereby the sewage can be converted into bio-gas and manure, from the sale of which a net profit of Rs 11 crores annually can be obtained which will be recycled back into the project for the maintenance of the sewage pumping and treatment plants. The major by-products of sewage treatment would be methane, bio-gas, manure, poultry feed and fish.

The international community has also shown interest in the Ganga Project. France has extended technological and financial assistance in cleaning the Ganga at Varanasi. Similar promises of assistance have been made by the World Bank, USA, The Netherlands and the Thames Water Authority, England.

ANITA NARAYAN

INDIAN CLASSICAL MUSIC

Indian music, which traces its source to Brahma, the creator is believed to have been revealed to men through the sage, Bharata. Although the earliest evidence of Indian music is found in the Sama Veda, it is not until the 2nd century B.C. that a detailed written record was available in the Natya Shastra of Bharata.

Indian music underwent substantial change during Muslim rule with Arabic and Persian strains being harmonised with it. However, the revival of Indian classical music in the present century is greatly due

to the pioneering work of two musical scholars—Vishnu Digambar Paluskar and Vishnu Narayan Bhatkhande.

Indian classical music is generally divided into Hindustani (North Indian) music and Carnatic music. The principal forms of Hindustani vocal music are dhrupad, khayal, tappa and thumri.

Dhrupad, which originated around 500 years ago is believed to have been introduced by Raja Man Singh of Gwalior, though it was perfected by Tansen. Khayal, was created by Amir Khusro in the 13th century, who also contributed the ghazal and the tarana to Indian music. Tappa, which is in Punjabi was originally the song of the camel riders of Punjab. It has been greatly developed by Shorimeen, a Punjabi composer, whose real name was Ghulam Nabi. Thumri, which is generally a love song, arrived on the musical scene in the 19th century. It is believed to have been created by Nawab Wajid Ali Shah. The major forms of instrumental music include alap, jod and jhala.

Carnatic music traces its development to Purandara Dasa in the 15th century. It was perfected by the three master composers—Thyagaraja, Muthuswami Dikshitar and Shyama Shastri.

Some of the contemporary exponents of Hindustani and Carnatic music are as follows:

Bismillah Khan	Shehnai
Hari Prasad Chaurasia	Flute
Ravi Shankar	Sitar
Nikhil Bannerjee	Sitar
Budhaditya Mukherjee	Sitar
Rais Khan	Sitar
Shiv Kumar Sharma	Santoor
Imrat Khan	Sur-bahar
Asad Ali Khan	Rudra Been
Ali Akbar Khan	Sarod
Amjad Ali Khan	Sarod
Vilayat Khan	Sitar
Chitti Babu	Veena
V.G. Jog	(Carnatic)
Debu Choudhary	Violin
Kishori Amonkar	Sitar
Pandit Jasraj	Vocal (Khayal)
Bhimsen Joshi	Vocal (Khayal)
Arinuddin Dagar	Vocal (Khayal)
M.S. Subbalakshmi	Dhrupad
Balmurali Krishna	Vocal (Carnatic)
Siddheswari Devi	Vocal (Carnatic)
Fayaz Khan	Thumri
Zakir Hussain	Tabla
Shafat Ahmed Khan	Tabla
	Tabla

INDIAN CLASSICAL DANCE FORMS

India has a rich heritage of classical dance forms which are more than 2,000 years old and believed to be among the oldest in the world.

(i) Bharata Natyam—less commonly

known as *Dasiattam* (dance of slaves) has its origins in the classical Dravidian culture of South India. It was performed in temples by *devadasis* who were trained by traditional dance teachers called *natuvanars*. There are several outstanding performers of Bharata Natyam in India such as Yamini Krishnamurthy, Padma Subramaniam and Leela Samson.

(ii) Kathakali—a traditional dance form of Kerala, is an intricate combination of dance and drama. Contribution towards reviving this dance was made by Mahakavi Vallathol Narayan Menon, in 1930, who established the Kerala Kala Mandalam in order to promote Kerala's culture. Kathakali is exclusively performed by males, who play the female roles as well. However, *Mohiniattam*, a distinctive variant is performed by women. Kathakali dances which are usually based on stories from the Ramayana and the Mahabharata, are enacted to the music of percussion instruments such as the Chanda and Maddulum.

(iii) Kuchipudi—a classical dance form which originated in Andhra Pradesh has been popularised by Radha and Raja Reddy.

(iv) Odissi—originally performed in the temples of Orissa by women called *maharis* was performed later by young boys known as *gotipuas*, many of whom have become eminent teachers of Odissi dance today. The Puranas and the Geet Govinda are the sources from which the themes of Odissi originate, though ancient writers attribute the origin of Odissi to the cosmic dance of Shiva. Among the renowned exponents of Odissi are Kelucharan Mohapatra, Sanjukta Panigrahi, and Sonal Man Singh.

(v) Kathak—originally the dance of the story-teller or *Kathiko*, who narrated the familiar stories from Indian epics through dances, songs and mimicry. As a dance form it was popular in northern India. However, when the north came under Muslim influence it was divorced to a large extent from its Hindu religious content. Kathak dances belong to many *gharanas* or schools each with its distinctive style such as the Lucknow, Jaipur and the Benares *gharanas*. It is performed by both men and women, and the notable performers of India include Birju Maharaj, Shambhu Maharaj, Lacchu Maharaj, Sitara Devi and Uma Sharma.

(vi) Manipuri—a dance style performed by both men and women—has its source in the Manipuri folk dance and combines the themes of both Manipuri folklore and Hindu mythology. This dance form which is a graceful art has special significance for the Manipuri people. Rabindra Nath Tagore in his choreographies was greatly influenced by the Manipuri style of dancing.

A.N.

KIDSTUFF

Klinik-Rundschau, the first of its kind, and certainly very unusual, is a newspaper produced by child patients at a Tuebingen hospital in the Federal Republic of Germany. Stories, cartoons, drawings and poems contributed by sick children aged between three and 14, hog Klinik's pages. The publication's location is made clear by drawings on the title page of the second number of a thermometer, a hyperdermic needle and blood pressure apparatus. The newspaper stand is at the bed of a small boy 'treasurer'.

Klinik-Rundschau has been a runaway success with 200 copies of the first issue taken up so quickly that a rush 800 extra copies had to be printed, which is done free of charge in the clinic's printing office.

GENERAL KNOWLEDGE

Indian Education: A Statistical Study

The literacy level in India is still abysmally low. The 1981 census revealed that only 36.2% of the population was literate with the literacy levels of women and the people belonging to Scheduled Castes and Scheduled Tribes being only 24.9%, 24.1% and 10.4% respectively.

The rate of drop-out among children between classes I and VIII is above 75%. Again the rate is much higher for girls and for SC and ST children.

The number of children going to middle and secondary classes, however, has shown an increase from 22 lakhs in 1951 to 340 lakhs in 1983 and the country now has 1,75,000 schools as compared to 13,000 in 1947.

The number of students completing the higher secondary stage has risen from 2.37 lakhs in 1960-61 to 8.40 lakhs in 1981-82. And 83% of all those who complete the higher secondary stage seek admission in colleges and universities while only 20% of them are able to enter technical or professional institutions.

At the time of independence there were 700 colleges and 20 universities. Now there are 5,246 colleges and 140 universities with an enrolment of 33.60 lakhs of whom 9.76 lakhs are women.

The number of illiterates has actually increased between 1951 and 1981 though the

rate of illiteracy has declined. In 1951 there were 300m illiterates, now there are 437m illiterates. However, in 1951 only 16.67% of the population was literate while today 36.23% of the population is literate.

Female literacy in rural India varies widely between 64.7% in Kerala to 5.4% in Rajasthan. In Bihar and UP which together comprise 38% of India's rural population, the female literacy rate is a poor 9 to 10%.

If things remain unchanged India will have 500m illiterates by 2000AD.

While the literacy levels are uniformly low the quality of education is woeful: 9% of all primary schools have no buildings, 41.5% no blackboards, 72% no library facilities and 53% of them are without playgrounds. The expenditure on education has, however, mounted to Rs 2,304.16 crore in 1976-77 from Rs 114 crore in 1950-51.

The increase in expenditure on education has not been in proportion with the increase in the number of pupils. Therefore, the money spent on each pupil per annum has dropped. For college education it has fallen from Rs 330.9 to Rs 468.9; for professional education from Rs 1,640 to Rs 890. In the case of elementary education it has increased marginally from Rs 41.9 to Rs 55.2.

World's Highest Hydrel Project

About 1,500 workmen are toiling round-

the-clock to complete the world's highest hydroelectric project in one of the most rugged and inhospitable regions on the globe.

Once commissioned, the project is sure to revolutionise the economy and lifestyle of the people inhabiting Himachal's northern-most district bordering Tibet.

The project estimated to cost about Rs 13.58 crore, involves the creation of a small diversion on the Rongtong nullah before it falls into the Spiti river near Rangrik village.

The water is diverted through a 2874-metre-long channel and a 254-metre-long tunnel into an open reservoir from where it is taken through penstocks to turbines for generating 2 Mw of electricity.

The water channel, tunnel and reservoir have been designed keeping in view the extreme conditions prevailing in the region. The channel is covered and the water reservoir is so designed that if most of it freezes during winter, there will be enough liquid to run the turbines.

The penstocks, too, which are being specially treated by a Pune-based firm, will be buried underground and insulated against cold.

Two megawatts of electricity is considered more than sufficient for the entire Spiti valley, which is sparsely populated. There are no more than 7,000 persons in the valley and only three villages—Tabo, Kaza and Kibber—have more than 100 houses.

You Ask We Answer

Explain the term 'tie-breaker' as applied in tennis.

Sanjay Taneja, New Delhi

Tie-breaker is a means for deciding sets that have reached a certain tied stage, such as 6-6 or 8-8. The idea of the tie-breaker was conceived by an American millionaire James Van Alen to introduce a shortened system and break the monotony of service-dominated matches and confer frequency of a marathon sets.

There are two forms of tie-break scoring. There is the Van Alen's method in which the count of VASS which is referred to after the game score is 6-6. The player contesting 9 points. Player A serves for points 1 and 2 and then the receiver, player B serves for points 3 and 4. Similarly A serves for points 5 and 6 and B on points 7 and 8. The score is 4-4 and the deciding ninth point is to be played, the receiver may elect to receive in whichever court of his/her side of the net he/she prefers. This system of the tie-breaker is, however, only popular in the US.

The 12-point tie-breaker, conceived in England and used at Wimbledon and in the Davis Cup matches is more popular. This becomes operative when the game score is 8-8. In a 12-point tie-break, player A serves from the right court for point 1, player B from left and right courts for points 2 and 3, player A in singles or C (in double) from left and right courts for points 4 and 5, then again player B in D (in double) from left and right courts for points 6 and 7 and so on. Players change sides when all points have been contested, and again after every 6 points.

As long as it is necessary, Game and set goes to the first player to win 7 points unless the points score is 6-6. Then play must continue until one player has a lead of 2 points.

What does the term 'ace' or 'double ace' mean in lawn tennis?

Ratan Tatarbe, Ranchi

Firstly, the game is no longer referred to as lawn tennis, as most tournaments are played on clay or hard courts or on artificial surfaces. Only Wimbledon and a few other tournaments are still played on grass courts. Hence, the game is now known as tennis and not lawn tennis.

An ace is a service winner that the receiver does not touch. A double ace is consecutive service winners of such a nature.

Who was the founder of cricket in the world? And how and when did it spread to India?

Krishnan Venkat Raman, Salem

Cricket grew most strongly in England but its precise origins are unknown. An apparent reference to its being played in Kent is contained in the wardrobe accounts of Edward I in 1300. There are references to the game of cricket in the reign of Elizabeth I and in the early 17th century when a historian refers to "the crooked staff wherewith boys play at cricket".

In its early stages, cricket was a game confined to peasants. By the 18th century it spread to all parts of England, agricultural south and mid-England.

The first established cricket club was founded in Hampshire, in a village called Hambledon. The first known records of cricket are the matches played by Hambledon club. In the 1790s, cricket became popular in London, the Marylebone Cricket Club (MCC) was formed, which organised and drew up a uniform code of rules for cricket all over England.

A Parsi lawyer can be considered as the founder of cricket. It was an expression of the attainment of the peasants and working classes in England and became an organised sport since the inception of the MCC. Cricket has a history of considerable antiquity, dating at least from 1721. Europeans reported the game and not until the 1840s did Indians begin to take part in organised matches. Successive British princes and their distinguished patronage, and Indian princes used their wealth and power to spread the gospel of cricket at every level of society.

Parsi teams toured England in 1886 and 1888 and Vernon took out the first English team to India in 1888-89. In 1892-93 organised cricket tournaments started in India. There were a long series of Presidency matches played in Bombay and Poona between Europeans and Parsis which became the Bombay Triangular tournament in 1907 with the entry of the Hindus. The Muslims entered in 1912-13 making the tournament quadrangular. To further popularise cricket in India the Board of Control for Cricket in India started an inter-state competition in 1933-34 known as the Ranji Trophy.

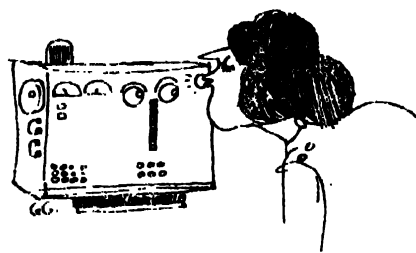
NOVY KAPADIA



NOTES FROM ALL OVER

Kiss Amiss

Machines can no longer be accused of being unfeeling and heartless. It takes very human displays of affection like kissing to turn them on—literally. For instance, a Japanese computer domiciled in Australia requires a wake-up kiss every morning from its owner to get activated.



The computers' carnal weakness is now being exploited to prevent computer thefts. Lip prints on the computer tell tales about the users and, therefore, act as a very revealing security measure.

However, Australian computer makers are planning to programme computers to recognise the users' smell, voice and even eyes—just in case the kiss is too fleeting to make a lasting impression on the computer.

The only drawback in this very 'physical' system of identification is that no thought has been given to the computer's infidelity. What if the computer decides it prefers someone else's kisses to its owner's?

Rasputin Reborn?

Seven decades after the death of Grigory Rasputin, the legendary charismatic monk of Russia, another religious mystic has stepped into his shoes. The Russian populace has given him its life savings and women have discarded their clothes for him—firmly convinced that by doing so they will be "purified".

Incredible as it may sound, in an officially atheist country, the spell that this tall, shaven-headed Mirzabai Kimbatbaev has cast over the masses is strongly reminiscent of that of Ras-

putin who had even influenced the wife of Czar Nicholas II.

For the last three years, Kimbatbaev has built up a reputation of being a mystic and healer. Surprisingly his cohorts include even the intellectuals and the scientists, besides the editor of a Moscow daily.

BIRTH OF A LEGEND

Rasputin, the charismatic and legendary Russian monk was the son of a poor peasant whose disorderly behaviour prompted his parents to christen him Rasputin, literally meaning 'debauchee'. He received no education and till the end of his life remained an illiterate. Till he reached the age of 33 he lived in his native village and married into a well-to-do family.

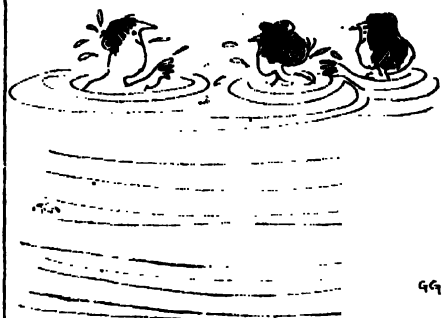
It was in 1904 that Rasputin resolved to alter his lifestyle. Deserting his family, he devoted himself to religious exercises, declaring to the masses that he was inspired by God. His passionate, ebullient nature, his great physical strength and the superstitious ambience in which he was brought up, gave an unexpected direction to his religious exaltation.

"Sin in order that you may obtain forgiveness"—was the practical rule which he preached. "A particle of the Supreme Being is incarnated in me," he told his spellbound cohorts. This extravagant and dangerous preaching brought him immense popularity and earned him the reputation of a 'holy man'. The doors of the Imperial Palace and all the fashionable cafes were thrown open to him.

Rasputin was also introduced to Czar Nicholas II and the Empress, who took tremendous interest in him. The mystic atmosphere which prevailed at the court and the constant fear for the health of the Czarvich created a favourable background for Rasputin. The eventual improvement in the health of the Grand Duke Alexis resulted in Rasputin wielding a commanding influence over the Empress.

But Rasputin's success at the court was arousing far too much jealousy among the court nobles. Subsequently, numberless stories of debauchery practised at the court, in which Rasputin's name was coupled with not only the Duchess but even the Empress, became a common topic in the Russian society. Eventually on Dec. 17, 1916, he was shot dead, bringing the legend to an end.

Neeta Lal, New Delhi



The authorities decided to act only when a girl under his influence apparently committed suicide. The controversial monk has now been put on trial though the charges against him have not yet been disclosed.

The superstitious streak in Russians explains why they resort to faith healers to cure their illnesses rather than doctors. One such famous healer, Djuna Davitashvili, a dark-skinned woman with long black hair and witch-like features, has been given official status at the Academy of Sciences, where her powers are being studied. Her past patients include Leonid Brezhnev. The print media has both attacked and praised her and it is against this background of official ambivalence that Kimbatbaev's success can be understood.

Kimbatbaev, born in a village in Central Asia was considered a good-for-nothing fellow until he met some pilgrims in the Uzbek town of Sultan Baba three years ago. He mastered some religious expressions, dressed up in a bizarre manner—with a skull-cap and beads, aping Rasputin and gathered a large following.

He created an image of asceticism and disdain for the mundane to influence the psyche of the masses and make them succumb to the vagaries of his emotions. And did "wonders" by cleaning the pockets of his followers saying that by doing so he was "cleaning" them to lead a "correct" life.

When women visited him he undressed them and went swimming with them in a pool while their husbands watched mesmerized!

Whatever the controversy that surrounds the charismatic mystic it cannot be denied that he continues to enjoy tremendous popularity among the masses. "He is the chiastest of men with a truly cosmic awareness," writes one of his female admirers.

Ode to Lady Liberty



The place—tiny Liberty Island in Upper New York Bay. The date—Oct 28, 1886. The event—unveiling of Frederic Auguste Bartholdi's monument to liberty and America's symbol of hope and welcome...the Statue of Liberty soared over the skyline, the tallest structure in the city. "Give me your tired, your poor, your huddled masses yearning to breathe free..."—verses inscribed on the statue's base echo the promise that brought to America's shore, over a span of some 60 years from 1892 to 1954, more than 17m downtrodden from every corner of Europe and from every continent. Some were fleeing poverty; others persecution.

A hundred years have passed...almost half of today's Americans are descended from someone who participated in this flood of immigration. It is a fitting tribute to America's heritage that on the eve of Liberty's centennial anniversary, all segments of American society are committing themselves anew to principles that will endure by enabling the project for the statue's renovation to be financed by private donations; recent immigrants, families long rooted in America, senior citizens and young students—all share the same desire to celebrate the American ideal of freedom and opportunity for everyone. It is this ideal that lured America's people to the young nation; it is this ideal that is embodied in the Statue of Liberty—formally

entitled "Liberty Enlightening the World" by its sculptor—though its slightly stern visage makes it abundantly clear that the streets were (and are) paved with gold only for those willing to work hard and adhere to the principles she represents.

The idea for her creation had its origin in the fantasy of Edouard de Laboulaye, a French legal scholar and professor. He believed that a century of friendship between the US and France—a friendship begun in the alliance that made American victory possible in its war for independence from Great Britain—called for a splendid memorial. Moreover, the founding revolutions of both the French and American republics shared a central ideal: liberty. It was during an after-dinner conversation with Bartholdi that de Laboulaye broached his idea.

Assembled first for display in Paris, the Statue of Liberty was dismantled, packed in 200 wooden crates, and shipped to America; and in October, 1886, Liberty took up her post as the nation's gatekeeper. Dense scaffolding now disguises the familiar icon, and her torch has been removed entirely. All 1,600 iron ribs inside the statue are being replaced with stainless steel ribs, the interior of the 46-meter-high pedestal is being renovated to reveal its architectural splendour and the torch—which at one point was enlarged, punctured by windows and illuminated—is being replaced by a solid, gilded version more closely resembling Bartholdi's original. Renovation is expected to be complete by Jul 4, 1986, in time for Independence Day celebrations, and in plenty of time for Miss Liberty's 100th birthday.

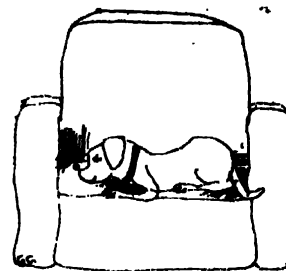
A Dog's Life?

American pets are basking in glory as they are reported to have their own dentists, psychotherapists, acupuncturists and insurance brokers. Their meals are supplied by the local delicatessens while their clothes are designer-made.

For anyone interested in catering to the needs of cats, dogs and goldfish, the future looks quite rosy in the US. The *Wall Street Journal* recently quoted the example of a New Jersey lawyer Edward Cooperman, who shelled out a cool 100,000 dollars in vets' bills for his Spaniel.

The dog in question, Cuddles, was afflicted by cancer. He was operated on at the prestigious Animal Medical Centre in New York; underwent chemotherapy at the University of Colorado and surgery at the University of Georgia. Cooperman had no regrets, for Cuddles, who has been owned by him for 14 long years is, according to him, his "best friend in the world".

For less serious ailments the fees in animal hospitals are more moderate but still cost the earth. While a cataract operation for a dog costs \$500, a mere consulta-



tion with a psychotherapist costs \$35. Hotels for dogs offer rooms fitted with a colour TV and carpets or \$40 a night. A special department store in New York, Macey's, stocks a wide range of clothes for pets, from jogging outfits to late evening dresses.

Pat Henderson, who has been dubbed the "Dior" of doggie fashion, sells coats in cashmere, mink, tweeds or little numbers in satin to such celebrities as Elizabeth Taylor and Egyptian President Anwar Sadat's widow Hihane.

However, for man's best friend nothing is too good. For according to Pat, "People love their dogs; when someone buys a cashmere coat for their dog, they are not displaying their wealth but their love."

JOURNEY TO THE HEART OF A COMET

The politicians orate, but the scientists collaborate. An academician, Harold Seggley, of the Institute for Cosmos Research in Moscow, explained, when the Americans learned that the Russians planned to send two space vehicles to intercept Halley's Comet in 1986, NASA cancelled its own project. Instead the US space agency has now spent more than a million dollars on modifying its deep-space tracking network so it can help the Soviet spacecraft make a closer rendezvous with the comet.

In December, 1984, two unmanned Vega spacecraft blasted off from Soviet Central Asia, one week apart, on an 18-month mission that will take them past the planet Venus (where they will both drop balloon-borne probes into the atmosphere) and then onwards into the heart of the comet.

Seven months behind the Vegas, in July, 1985, the Europeans launched a British-built spacecraft called Giotto which will follow a different orbit and pass even closer to the comet's nucleus—only 1,000 km—a day before the first Vega makes its nearest approach. A Japanese spacecraft—Planet A—will pass by at about the same time and meanwhile an American probe will be skimming past another comet which travels under the improbable name of Giacobini Zinner.

The rendezvous with Halley's Comet will be a brief event, for it comes barreling in towards the inner solar system cutting across the orbits of the planets, at an enormous speed that increases as it nears the

sun. Moreover, it is travelling around the sun in the opposite direction to the planets, and though it reappears regularly every 75 years its precise path is different each time because the gravitational fields of the planets shift it slightly.

Even if all the last-minute course corrections work, the various spacecraft sent to visit Halley's Comet will pass by at around 45 miles per second (70 km/sec), and will be gone almost before they arrive. Yet it is our first chance to see what a comet is really like, and we need to know.

It has gradually dawned on us over the past few decades that the solar system is not just the familiar nine planets trundling around the sun at relatively close range, with the odd comet and asteroid for variety. Far out in interstellar space, 1,00,000 times farther from the sun than ourselves, is the Oort cloud, a vast sphere of billions of

comets following their lonely, immensely long orbits around the sun.

Most of them will stay out there forever, insubstantial and invisible from the earth. But occasionally something jars one out of its orbit and sends it diving into the inner solar system. As it nears the warmth of the sun the frozen gases which make up most of its mass begin to thaw, and stream out behind it in a shining tail up to a hundred million kilometres long.

Once this happens a comet's lifespan is limited, for on each approach to the sun more of its gases are heated up and blown away by the sunlight. Halley's Comet must already be well into this process of attrition, having swung past the sun once every 75 years since it was first seen in 1066. But the great question is: is there anything solid in the heart of comets?

If a comet is just "a bagful of nothing"—a loose collection of tiny dust and ice particles—then comets could never pose a problem for us. But if comets have a large solid nucleus, as much recent scientific speculation has suggested, then that is an entirely different matter.

Since 1980 the theory has been gaining ground that the mass extinctions of plant and animal species that have occurred repeatedly in the history of life on earth are linked with the impact on earth of large chunks of debris such as may lie at the heart of comets. The last great slaughter of species happened 65m years ago, when the dinosaurs disappeared, but similar mass extinctions seem to have been occurring about every 250m years since life first appeared on the planet.

Lesser catastrophes have been decimating earth's life regularly every 28-32 m years, and it is now suspected that the reason may be periodic disturbances of the Oort cloud that send showers of comets into sunward orbits. Just one piece of debris less than 10 km across, striking the earth at cometary speed, would release more energy than all the nuclear weapons in existence, and change the climate more drastically than the much discussed 'nuclear winter'.

Recently Roman Smoluchowski of the University of Texas has pointed out that these cycles of catastrophe synchronise with the sun's orbit around the galactic centre, which periodically passes through areas where the dust clouds are much thicker. The solar system passes through the mid-plane of the galaxy every 250m years.

The suspicion is that far larger numbers of comets are sent plunging in towards the sun during these passages, and that the earth rarely escapes being hit during these bombardments. But it's all theory at this point, because we don't know if comets have solid centres. The spacecraft that pass by Halley's Comet should give us the answer.

P.S. It will be 21m years before we next pass through thick dust clouds (but on the other hand, that's just when the comets may be most numerous—every new comet may be a potential danger).

Gwynne Dyer, London

Stars And Careers



SCORPIO

If you were born between October 23 and Nov 21, the Sun at the time of your birth occupied the zodiac sign Scorpio, which is by far the strongest and most extreme sign of all. Scorpions have great strength of will and positiveness of character, making them strong, determined, firm, dignified, controlled, reserved, tenacious and magnetic. They have fertile imagination and sharp intelligence. They are also tactful, discreet and cautious. Though fond of approval, they are not easily swayed by other people. Mars ruling this sign, makes people born under it very shrewd, passionate and jealous. They can be generous, faithful and devoted friends but dangerous and rather unforgiving enemies. Having the ability to withstand continued excesses, Scorpions can go places if they act judiciously and keep their impulsive nature under check.

Scorpions generally enjoy good health. They will be fortunate in financial matters. They may gain through foreign dealings or by travel and also in pursuits connected with land, food, clothing, etc. Careers in military, medicine, insurance, law, mines, steam engines, labour departments, enterprises dealing in tea, coffee, tobacco, copper, tin, parboiled rice, mine ores, excavation detective service, etc are likely to attract their attention.

Normally, Mars, the owner of Scorpio, remains in one sign for about one and a half months. But during 1986 it will remain in Capricorn from Mar 28 to Oct 9, 1986. This position will give Scorpions tremendous energy, self-confidence and help them in arriving at correct decisions. The quantum of achievement, however, will be proportionate to their efforts.

Jupiter will remain in its own sign from Feb 21, 1986 for about one year. This will improve the Scorpions' financial position beyond their expectations. Their social circle will expand qualitatively and quantitatively. This position also results in the addition to the family by way of marriage or birth. Sun will become very helpful around January, February, March, April, August and September. These months will prove fortunate in regard to career, social status, establishment of good rapport with superiors and elders and success in competitions. In short, 1986 will be a very fortunate year for Scorpions.

Lechman Das Madan, New Delhi

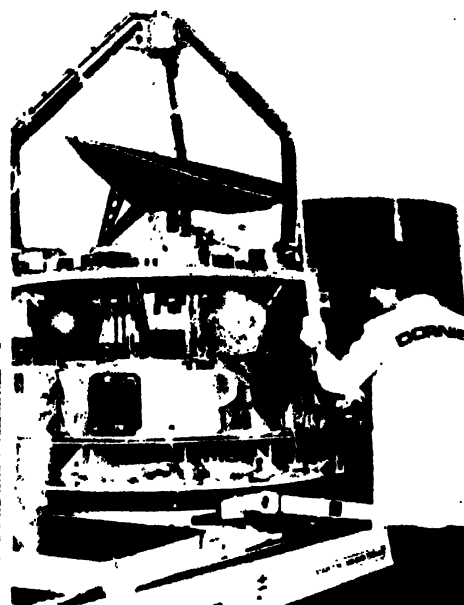
Death Wish

Teacher: Did you write this poem yourself?

Student: Yes, every word of it.

Teacher: Then I am glad to meet you, Edgar Allen Poe. I thought you were dead long ago.

HAIL A COMET



After 76 years, Halley's Comet is once again nearing its closest proximity to the sun. An event scientists are eagerly looking forward to. In July this year the Europeans launched the Giotto probe which is expected to pass within 100 to 500 km of the nucleus of Halley's Comet. Giotto, named after the 14th century Italian artist who painted the comet, will be conducting as many as 10 experiments during the few hours it takes to cross the comet's orbit. These will include examination of the chemical composition of the almost 2,00,000 km dust and gas layer that surrounds the comet's solid nucleus, examination of the neutral gases and ions, measuring the magnetic field in the area around the comet and mass spectrometry of the dust envelope. Scientists are also interested in the influences the sun exerts on Halley's Comet's periphery. The Giotto probe will also be transmitting photographs of the comet's nucleus back to earth. An incredible feat considering that it will fly at a speed of nearly 69 km per second!

Word Play-3

BY RANI P. SOMAN

A	O	L	I	B	E	S	M	A	E	B	L
R	G	H	A	I	H	A	A	D	M	A	Q
C	T	R	H	F	H	A	G	I	W	T	N
E	H	D	A	A	O	E	N	O	K	X	E
E	N	A	N	W	H	N	G	D	R	I	S
A	N	T	U	N	A	N	T	A	A	U	A
N	A	D	A	D	O	L	G	A	I	R	R
W	O	V	U	L	H	N	K	K	I	A	I
I	A	M	A	L	E	A	N	A	K	N	N
H	L	N	O	Y	K	A	R	A	T	E	E
H	N	L	I	L	L	A	Y	I	K	R	T
U	A	B	A	O	O	A	R	A	C	A	E
L	A	L	S	I	J	S	M	S	H	A	H

The names of 25 Indian personalities (politicians, sportsmen, writers, actors/actresses, bureaucrats, diplomats, technocrats, performing artistes (?), service chiefs, who were in the news in the recent past, are hidden in this grid. They have been set horizontally, vertically or diagonally, forwards or backwards. No letter has been used more than once. Can you spot them?

P.S. In *Word Play-2* (CCTimes, October '85) a part of the clue—"Indian state capitals"—was inadvertently omitted. Yet, our readers were quick to catch on and mail in innumerable correct entries.

HOW TO ENTER

● Print the answers neatly in capital letters along with your name, age and address. Each Word Play and Apperception entry must be written **only** on postcards.

● You must send in any number of entries, but each must be numbered accordingly and accompanied by its respective COUPON.

● Though all your entries will be included in the draw of lots, you will be entitled to only one prize—the highest in case you're getting more than one.

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Solutions in January.

Word Play
Coupon

Apperception Test
Coupon

OBSERVE & DESERVE



IMAGE

Meher is obviously admiring herself. And why shouldn't she? Considering Mother Nature's magnanimity towards her. By the way, in case you are looking for some mistake in the sketch, you are on the wrong track. So explain what you have observed in not more than 20 words. VIJAY hopes that most of you will hit the nail on the head.

PRIZES

WORD PLAY-3:

2 First Prizes

Jack Higgins' *Confessional*, Desmond Bagley's *Juggernaut* and Robin Cook's *Mind Bend* from Rupa & Co., New Delhi to the first two **all-correct** entries (**one-error** entries if there are no all-corrects) pulled out of the hat. **Plus 5 Consolation Prizes**—Desmond Bagley's *Night Of Error* from Rupa & Co.

APPERCEPTION TEST-6:

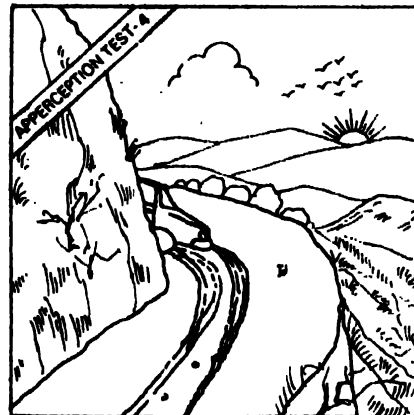
10 First Prizes

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SOLUTIONS

APPERCEPTION TEST-4:

The hilly, tortuous road evoked some outlandish explanations: "The car cannot leave tyre-tracks on a road carved out of the cliff." "As the car is moving away from the reader, and is keeping to the left, it is 'behaving' scientifically." But the smart ones saw through Vijay Konwar's details and peered down the tyre-tracks and came up with the right answer: "There should have been four impressions of tyre-tracks on the road—two of the front wheels and two of the back wheels."



Winners

1. K. Anjaneyulu, Ongole (Tq), Prakasam Distt. (A.P.). 2. M.A. Kishore, Hyderabad. 3. Subrat Kumar, Sundar Ray, Delhi. 4. S. Rajarajan, Trivandrum. 5. Dinesh Prakash Goswami, Allahabad. 6. Jagatjyee Panigrahi, Delhi. 7. A.P. Bagchee, New Delhi. 8. Navneet Mathur, Sagar (M.P.). 9. Souvik Poddar, Calcutta. 10. Pratik Kumar, P.O. Basudeopur (Bihar).

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WORD PLAY-1

1. Shakespeare 2. Lamb 3. Cronin 4. Blyton 5. Hardy 6. Swift 7. Hemingway 8. Wodehouse 9. Kipling 10. Rushdie 11. Verne 12. Shaw 13. Rand 14. Hugo 15. Wells 16. Carroll 17. Doyle 18. Twain 19. Dickens 20. Dumas 21. Austen 22. Zola 23. The book—"Pygmalion" by G.B. Shaw.

Winners

First Prize (all-correct): 1. A. Chockalingam, Vickaramasingapuram 2. Priya Bhatia, Hyderabad.

Consolation Prize (all-correct): 1. Rakesh Kumar Gupta, Patna 2. K. Anjaneyulu, Ongole (Tq), Prakasam Distt. (A.P.) 3. Hemant Kumar, Patna 4. Amitabh Narula, New Delhi 5. S. Somasundaram Iyer, New Delhi.

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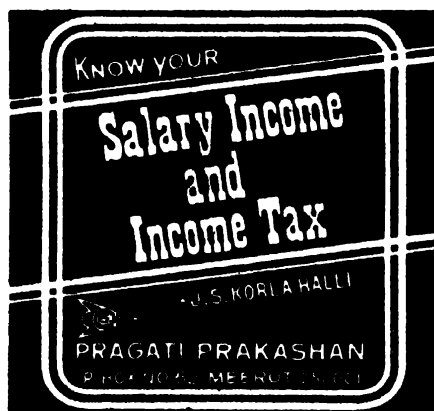
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THE TAX AXE

The reward of energy, enterprise and thrift is tax," wrote William Feather. On the other hand Justice Oliver Wendell Holmes said, "I like to pay taxes. With them I buy civilisation."

Taxes were levied in India even during the days of Kalidas and the houses of tax-evaders were raided to unearth wealth accumulated through improper means. Such raids are mentioned in *Raghuvansh* and other works of Kalidas. The words *vritti*, *uphar*, *upalaa* and *balimar* were used in the works of the poet to convey the meaning of taxation.

Paying informants a certain percentage of the amount recovered from income-tax evaders is a common practice in many countries. The greatest amount paid for information concerning a case of income-tax delinquency was 79,999.93 dollars paid by the United States Internal Revenue Service to a group of informants. It has been found that such informants are often low-income accountants or women scorned.

Not all nations burden the people with taxes. There is no income-tax paid by the residents on the 1,062.4-acre Lundy Island off North Devon, England. In Bahrain, Kuwait and Qatar the rate of tax regardless of income is nil.

Michael R. Patrao, Mangalore

MAN MOUNTAIN CAUSES JAM

The world's tallest man, Alam Channa, caused traffic jams when he walked down New York's Fifth Avenue and lunchtime crowds milled around him.

Channa, a Pakistani, who stands eight feet and three inches, is currently visiting the US. Dazed Americans jostled on Thursday (Aug 24) to shake hands with the 400 pound Channa as American television crews and photographers recorded the event.

"I thought I was tall", explained a six-foot-basketball player straining to look at Channa's face.

Mohsin Ali Khan, Orissa
From *The Statesman*

DEATH-STAR

A controversial new theory regarding the cause of the sudden extinction of dinosaurs has been propounded by the U.S. scientists. It was the solitary instance of mass eradication of living species on earth. It has been happening in a regular, periodic fashion, every 26m years.

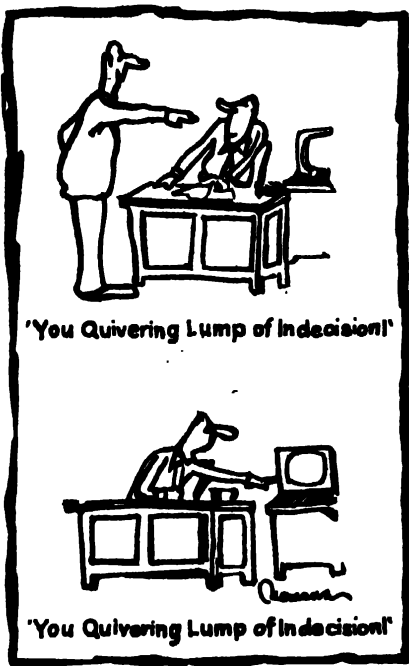
According to this theory, the cause of the cyclic mass death is a dim, dwarf star that is a companion to our sun. This star is supposed to be revolving in an elliptic orbit outside the solar system. The periodic encounters with the periphery of the solar system every 26m years result in a deadly unleashing of millions of

comets, some of them striking the earth. Consequently the atmosphere is freighted with the clouds of dust particles and water vapours due to the tremendous explosion. This leads to the blocking of sunlight for months which generates violent alterations in the climate and photosynthesis inconducive to the sustenance of life forms.

The scientists and astronomers are trying to seek out this star in the universe. If found, they propose to name it 'Nemesis', after the Greek goddess who relentlessly persecutes the excessively rich, proud and powerful (a reference to the dinosaurs).

Rajesh Raheja, New Delhi
From *Popular Science*

PASSING THE BUCK

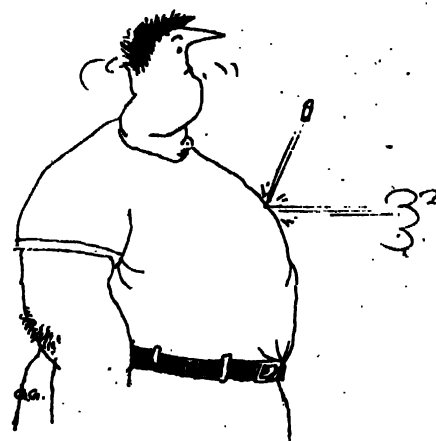


Pankaj Sharma, Aligarh
From *Upton Journal*

ONE-MAN PARTY

Computer buffs know a fancy word, 'teleconferencing', that denotes ways of running meetings between people, even though they may be separated by hundreds of miles. Computer-controlled communication links now allow groups of people to converse without their travelling to the same geographical location. And, what's good for business is good for pleasure: you can run a party with only you there! In a different context, Andy Washol once talked about attending a party where only he was present. In the US this type of facility is offered on a practical basis. The Compuserve company is happy to connect people, via an information service, to other owners of computers and terminals. Hence the engaging advertising blurb: 'Last night, we exchanged letters with mom! then had a party for 11 people in nine different states and only had to wash one glass... And you can use a scramble if you have a secret you don't want to share too widely.'

Rajasekhar L. Rao, Surat



BULLET-PROOF FLAB

A 208 kg (450-pound) man failed to die after a Massachusetts state trooper shot him eight times. Lawrence Bell, 24, had 16 entrance and exit wounds in his chest, abdomen, right arm and scalp.

The surgeon who operated on Bell said his fat acted like a sandbag, preventing the bullets from hitting his vital organs.

A police spokesman agreed. The eight bullets did little damage. "They just went around in his fat."

Ashish Jain, New Delhi

THE ROBOT THAT SMELLS

Our noses recognise up to 1,000 different smells, and identify combinations of these smells. Surprisingly, this olfactory feat is accomplished with only a handful of gas sensitive nasal sensors—the olfactory receptors. These send signals that are first processed and then stored by the brain.

So how is a robot going to simulate these functions? Instead of human olfactory receptors, the robotic nose will consist of a bunch of tiny, gas-sensitive semi-conductors. These, which are nothing but bits of corroded metal wired with microcircuitry, detect a given smell by reacting to its gases. In the presence of a particular gas, certain semiconductors send impulses to the robot's brain, which is, of course, a computer. And depending on which semiconductors emit an impulse, the computer can detect the gas present.

R. S. Khandwa

YOUR PAGE

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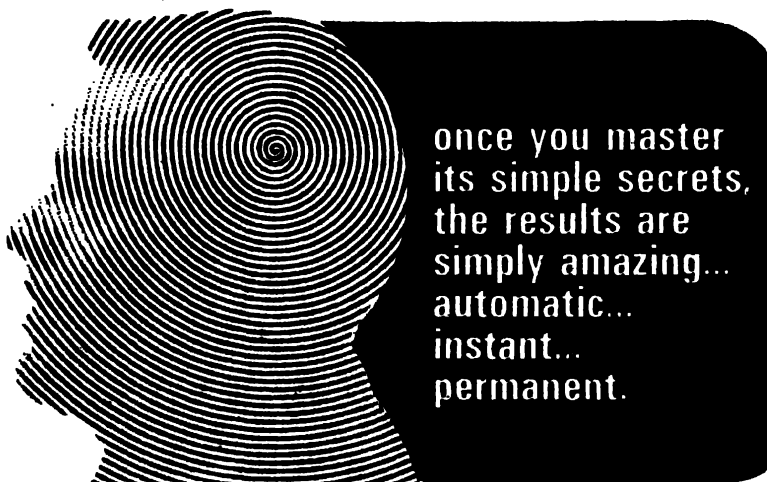
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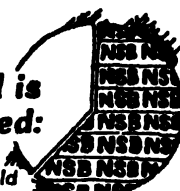
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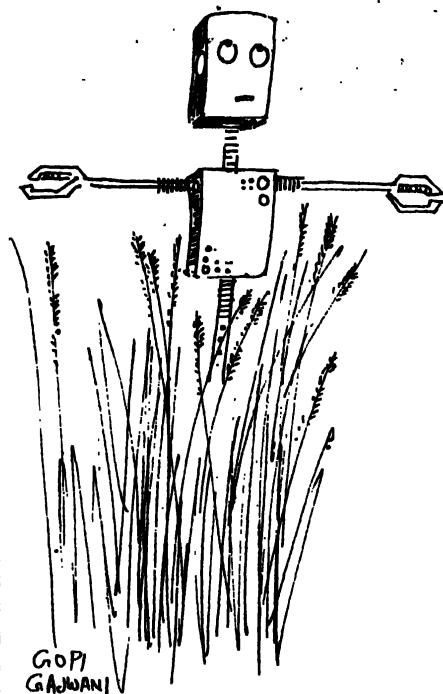
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SCIENCE SPECIAL: To bring you up to date on the latest in science, an exhaustive feature with detailed articles. Covering environment, medicine, chemistry, astronomy, energy, the nuclear scene. Also, a dictionary of scientific terms. Plus everyday phenomena and their scientific explanations. ● **PUBLISHING:** A study of the publishing industry—its problems, scope and job opportunities. ● **PREMIER INSTITUTIONS-2:** Indian Military Academy ● **PRACTICE TESTS:** Quantitative Aptitude, Test of Reasoning, English. ● **SPACE-5.** Plus our regular features

LETTERS

Weapon Of Exploitation

Religion is indeed a most effective weapon to exploit humanity

Avnish Pethek, Delhi

Best Letter: Rs 40

Boomerang!

Does Reagan realise that his Star Wars programme will ultimately devour the stars on his own flag?

Neeraj Sherna, Delhi

Prize-winning Letter: Rs 25

Integrity Indeed!

Talk about national integrity! When walls of separation and alienation are being shored up with obnoxiously coined words like 'quotas' and 'reservations'

Kalyen Mukherjee, Calcutta

The Right Cause

The time has now come for man to fight with all his might for love and peace.

Rajinder Kapoor, Kernal

It is bad that not all wish for peace, it is worse that most do not work for it. It is worst that some of them are opposed to it. It is a pity that there are many who do none of these

Predip Sementerey, Bhubaneswar

The Devil Within

Disarmament is hardly the perfect solution -- if there are no bombs, man will still fight with sticks and stones and his nails and teeth, as long as his warring instinct remains

Savite Murti, Cochin

Meaning Of Tourism

Promotion of tourism does not mean building five-star hotels, but providing opportunities to all sections of people to know more about their country and its cultural heritage. At present for the government, tourism definitely means only foreign exchange

V. Vijaya Krishnan, Hyderabad

Who Is Guilty?

In *Hells Folks* (Oct '85) you talk of misguided persons. Who are they? Are they the Sikhs or the misguided politicians who instead of settling the Punjab issue went on creating problems by promoting Bhindranwale, etc., which we all know?

K. S. Sethu Madhevan, Madras

A Great Help

The article *How To Tackle CAT-1* (Sep '85) by Edgar Thorpe was very useful and especially, the portion on English and Quantitative Aptitude was well-written. I would like to see more of such articles, which make your magazine different from others.

Tilak Raj Sharma, Ferozepur City

For the past few months, I have been reading your magazine regularly. Since I am preparing for the CAT (Common Admission Test), I found the exclusive article on CAT (Sep '85) very useful. I am pleased to learn that more articles devoted to CAT will be appearing in your forthcoming issues.

Surinder Kumar Mehejan, Panjkula (Haryana)

Priorities

Here are two very special news items: (i) Rajasthan is in the grip of the worst famine of this century. (ii) Rs 40-45 crores are being spent on the Congress Centenary Celebration Exhibition in Jaipur.

Ravindra Misra, Jaipur

World War III In The Making

Looking at the goings-on between the superpowers, I feel the next world war will be fought over the issue of disarmament.

Anil Sharma, Patna

Should Be But Never Is

All India Radio broadcasts in a regional news bulletin: "The state's forest department has implanted 2,50,500 seedlings during this week to celebrate 'Vano-Mahotsav'. But the news that never comes after a month: "Out of 2,50,500 seedlings implanted to celebrate Vano-Mahotsav, 2,50,000 died due to want of care."

P.K. Sahoo, Dist. Dhenkanal (Orissa)

Parties Galore

In our country, there are more 'national' parties than 'national' men. The political parties easily outnumber the politicians truly committed to the country's progress. This is hardly surprising considering everybody wants to reach the top and assume power

Yogesh Kalra, New Delhi

Worth A Thought

On the occasion of the Akali Dal's victory in the Punjab elections, PM Rajiv Gandhi said that it is the victory of unity and integrity. I wonder what he would have said had the Congress (I) won.

Krishna Chandra Singh, Cuttack

Waste Of Precious Talent

It was distressing to know that many of the IIM toppers (*How To Manage Management*, Oct '85) have chosen to join multinationals like Bank of America, American Express and Citibank rather than

serve their own country. Swami Vivekananda's words come to my mind, "Him I call a traitor who having been educated at the expense of the poor man pays not the least heed to him."

V. Jayendran Menon, Bangalore

Akalis And Terrorism

CM S.S. Barnala said, "The Akali Government's policy towards the terrorists in Punjab would be one of love." The question is whether the policy would shatter or shelter terrorism.

Rajesh Kumar, Delhi

Make The Makers

Our education system makes it amply clear that adequate provision must be made to educate the makers of the education system itself.

Kumar Rajiv, Patna

Die A Thousand Deaths

Cowards die many times before their deaths. Nay, VIPs in a democratic country die many times before their deaths.

Sanjay Kr Sahay, Jamshedpur

Victim Of Progress?

I have a sinking feeling that India is soon going to be a pathetic victim of computerisation.

Rajiv Mehrotra, Lucknow

Impossible Situation

India is trying her best to be a superpower. Perhaps that is why she is unable to prevent many of her people from going below the poverty line every year. Excusable indeed.

Subhendu Kumar Mishra, Bhubaneswar

Irrelevant

This is with reference to *Preparing For An Interview-2* (Sep '85). The board members of any interview board have to judge the knowledge and the overall personality of the interviewee within an average time of 15 minutes. If the interviewer asks the candidate what the 'S' in his name S. Gopal stands for, his answer should have been precise and to the point, that is, 'S' stands for Subramanyam. The answer to the second question regarding the origin of his name should have been Gopal is one of the several names of Lord Krishna. Lord Krishna is one of the several (10) incarnations of Vishnu, the preserver of the vast universe, according to Hindu mythology. The rest of it was irrelevant to the question.

M. Mohan Rao, Delhi

Mistaken Identity

In *Word Play 1* (Sep '85) out of the 22 authors mentioned four are French and two Irish. The French authors are: Zola, Emile (1840-1902); 2. Hugo, Victor (1802-1885); 3. Verne, Jules (1828-1905) and 4. Dumas, Alexandre (1803-1870). The Irish authors are: 1. Swift, Jonathan (1667-1745) and 2. Shaw, George Bernard (1856-1950). The name of the book supposedly by an American and English author was *Pygmalion* by G.B. Shaw (Irish).

Assem Seksena, New Delhi

WIN A PRIZE

Do our articles provoke you to say something? Is there anything else you feel strongly about? Here's your chance to say it and make some money in the bargain. The best letter will win Rs 40, the second Rs 25.

So, why don't you get cracking?

Your letters should be legibly written/typed, not exceed 200 words and include your full name and address. We may edit them for purposes of clarity or space.

Hello folks..



As we were moving out of the marriage pandal, thanking the hosts for the lovely food and beautiful coffee, a gentleman butted in, "The coffee was good, Mrs Batra." The lady smiled, "I hope the food was also good, Mr Sharma." "Yes, yes, of course," said Mr Sharma and walked away, not realising the full implication of what Mrs Batra had said.

Not many people talk realising what they are saying or remembering that every word has an effect. In this particular case, what Mr Sharma conveyed to Mrs Batra was that only the coffee was good. In fact, he wanted to say that the food including the coffee was good. If he had said, "Coffee was also good," he would have effectively conveyed his feeling to Mrs Batra.

Language, in reality, is the vehicle to communicate with each other. You have to use different kinds of words with different people to communicate the same idea. Suppose your friend has been given an extension of service. You can safely say to him: "I am happy that you have got an extension of two years." But you cannot say the same words to your boss because if you do he may feel offended. An appropriate expression would be: "Sir, I have heard that you have been persuaded to work for two more years. We are happy."

Churchill, it is said, attached great importance to correct usage of words. M.O. Mathai has narrated a few instances of Churchill's in his book *Reminiscences Of The Nehru Age*.

Once, at a dinner table, Churchill told his wife, "You ought not to say very delicious; 'Delicious' alone expresses everything you wish to say. You would not say 'very unique'." In this connection, Lord Moran (the famous physician) says that Churchill once thought of including the following in

a speech at a university: "A man called Thompson went to a surgeon and asked him to castrate him. The surgeon demurred. But when the man persisted and argued, he eventually agreed and took him into the hospital. The morning after the operation, Thompson woke up in great discomfort. He noticed that the man in the next bed was in pain and was groaning. He leaned towards him over the side of the bed. "What did they do to you?" he asked. The man replied, "I have been circumcised." "Good Lord" Thompson exclaimed, "That is the word I couldn't remember when the surgeon asked me what I wanted done."

One evening Churchill was sitting on his bed and shouting for his hotwater bottle. The valet appeared. Churchill asked him where the hotwater bottle was. The valet replied, "You are sitting on it Sir, not a good idea." Churchill smiled and replied, "It is not an idea but a coincidence."

Words change their meaning in different times and societies. If one is not careful, one can suffer a great deal of embarrassment. About ten years back, when I was on my first visit to the United States an American friend invited me for dinner. I asked him: "When should I reach?" He said: "Come any time, earlier the better as we would have more time to chat." He had also invited a few Indians and Americans to meet me.

I reached at 7 p.m. and found no one there. The host welcomed me and offered a drink. I was a little confused as there was no sign of a party. I thought maybe I was early and people would come around eight. But there was no sign of other people joining in. Then I asked: "What has happened to the others. You said that you have invited a few more?"

"Oh, they all came in the noon. We had a good gathering, and great fun. Since there was no way to get in touch with you, we thought you had forgotten, as many Indians do."

My pride was hurt and in an annoyed tone I retorted: "You wanted me for dinner, didn't you?"

"Dinner on Sunday means the noon meal. On other days also we invite for supper. Dinner is very formal and is only on special occasions."

I learnt a lesson.

The Chinese have become crazy about learning English as the language is considered a sure road to success. This was revealed by the members of the

Chinese Journalists Association currently in India. Apparently, the Chinese have realised that knowledge of an international language like English is very necessary for getting better jobs in foreign countries and promoting business in the international market. Though the Chinese have the option to learn other languages like Japanese, Russian, French and Spanish, the majority prefer English. The learning of English has gained prestige among intellectuals and those who do not know the language feel envious of those who know it. Subsequently, the prestige of English teachers has soared. Keeping in view the importance of the language, the Chinese government has made teaching of English compulsory from the eighth standard onwards.

Since the Chinese are far behind as far as the knowledge of English is concerned, they have devised imaginative ways of teaching the language. Many magazines have come up to help the Chinese to learn English clearly and systematically.

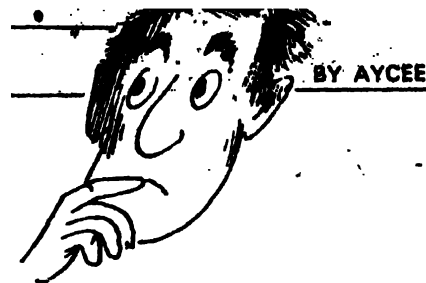
The way the English language is gaining importance in China, the authorities are afraid that it may replace the Chinese language itself. Therefore, great care is being taken to protect it. The Chinese are not encouraged to have day-to-day conversation in English and it is considered preposterous to speak English wherever it is not desired.

We, on the other hand, are discouraging the learning of English. Though we have a well-developed infrastructure to teach English and a strong desire on the part of an average Indian to learn it, the teaching of English has become sub-standard due to the myopic vision of politicians.

We need a pragmatic approach towards the English language. There is no doubt that it is an international language and knowledge of it is a definite advantage. Why then should it not be taught scientifically and widely in India? We have a large number of English teachers; the only problem is that English is not taught at the right stage and in the right way.

Since young boys and girls in schools and colleges are the ones who are most directly affected by the knowledge of English or the lack of it, a demand should come from them for the effective teaching of English.

TEST YOUR WORD POWER



The per-fect WORD. Is it on the tip of your tongue, or is it hidden in the back of your mind? Either way, we agree, it's an eloquent problem.

And so each month we bring you this column, tailor-made to suit your requirements. Twenty new words complete with their meanings and usage.

But what's so unique about our word power exercise? The 20 sentences are information-packed and fact-laden—facts which are often not easily available. A weighty two-in-one package, wouldn't you agree?

Tick the word or phrase you believe is *nearest in meaning* to the key word:

1. **abstain:** A: to hold away from B: weaken C: win the favour of D: substitute one thing for another.
2. **ale:** A: pure colourless drink B: light-coloured beer C: tree (of the birch family) D: passage.
3. **blitz:** A: heavy snowfall B: bright flame C: a swift, sudden attack D: dishonest trick
4. **boisterous:** A: heavy B: noisy C: healthy-looking D: frivolous
5. **cavity:** A: underground room B: large, open pit C: hollow D: underground passage
6. **chaos:** A: destruction B: decay C: total disorder D: deception
7. **counterfeit:** A: an exact copy B: sudden attack C: violent retort D: forged
8. **deport:** A: to expel B: overthrow C: cause to wither D: subdue
9. **elude:** A: to dodge B: remove C: draw out D: make clear
10. **ferment:** A: to undergo chemical changes B: pretend C: boil D: recede
11. **galvanise:** A: to shock or rouse B: push C: hasten D: sparkle
12. **mausoleum:** A: a floor covering B: a place of pilgrimage C: a stately tomb D: a museum
13. **opulence:** A: musical composition B: greed C: wealth D: energy
14. **precarious:** A: unimportant B: uncertain C: dull D: steep
15. **revile:** A: to attack with contemptuous language B: bring back to consciousness C: cancel D: refuse to accept
16. **sedative:** A: amiable B: deceptive C: dreamy D: causing sleep
17. **squabble:** A: poverty B: petty quarrel C: shrill cry D: small tree-climbing animal
18. **subside:** A: to go down slowly B: become strong C: give in D: reduce in stature
19. **troupe:** A: a group of soldiers B: freshwater fish C: agreement to stop fighting for a time D: company of performers
20. **tycoon:** A: violent storm B: playboy C: heavy instrument D: powerful businessman

(Answers on page 70)

THOUGHTS

BY M

Here's some food for thought... provided you pause to ponder over it. These passing thoughts on various social, political and economic issues, expressed by a few observant minds, often portray the bare realities of life. They may even set your thought processes in motion!

Monarchs are important, but the true achievement is that of the person who turns out the monarch. It is P. T. Usha, after all who gets the gold medal, not her coach!

Abu Abraham in *The Hindustan Times*

The world economy today is faced with increasing protectionism, falling commodity prices, and a severe debt crisis, made worse by high interest rates.

N.C. Menon in *The Hindustan Times*

Sir Robert Peel, against heavy odds, succeeded in getting parliamentary approval for a regular Police in 1829. Since then the British policeman is called a "bobby"—an affectionate diminutive for "Robert".

N. S. Saksena in *The Times Of India*

Throughout their history the British have been reluctant to give more than the barest minimum powers to their police. Indeed, Britain had just

no police force till 1829. The public opinion feels that the police would become an instrument in the hands of the executive to suppress freedom.

N. S. Saksena in *The Times Of India*

The way to solve regional problems is through dialogue and negotiation and not invasion and occupation.

Ronald Reagan to *TOI* correspondent

By digging a hole for South Africa (SA) they (Commonwealth countries and the US) could end up burying themselves. If SA were to hold up their chrome exports, one million Americans would lose their jobs and promoter industries in Europe would be brought to a standstill.

SA President Pieter Botha's reaction to Bahama Proposal, *The Times Of India*

The upsurge of black anger within the country (South Africa) seems to be approaching the point of no return. The writing is writ large on the wall: an orderly and peaceful change or a bloody end to the most inhuman dispensation in the world. The choice is Pretoria's.

Indian Express

Plato, the fountainhead of Western political theory, declared over 2,500 years ago that tyrants are by nature criminals.

The Economist

Riots are more frightening than wars. You know, in a war, exactly whose target you are. In riots the bystander... is likely to be an indiscriminate target for both sides.

Dom Moraes in *Debonair*

The only real freedom is in order, an acceptance of boundaries.

Peter Ustinov

I do not know of any society of people, animals or insects that has existed for long without an elite. Russia and India, as well as countries in the West, have their special academies designed to produce excellence.

Civilisations have often been found on classical languages, and to learn to think in a foreign tongue is no bad training for the mind.

J. T. M. Gibson in *Indian Express*.

QUOTABLE QUOTES

The object of government in peace and in war is not the glory of rulers or races, but the happiness of the common man.

William, Lord Beveridge

A rich man's joke is always funny.

T. E. Brown

If we command our wealth, we shall be rich and free; if our wealth commands us, we are poor indeed.

Edmund Burke

The best reason why Monarchy is a strong government is that it is an intelligible government. The mass of mankind understand it, and they hardly anywhere in the world understand any other.

Walter Begehot

Everything is only for a day, both that which remembers and that which is remembered.

Marcus Aurelius Antoninus

Rome has spoken; the case is

concluded.

St Augustine

A man that studieth revenge keeps his own wounds green.

Francis Bacon

If there is a hell upon earth, it is to be found in a melancholy man's heart.

Robert Burton

An apology for the Devil—it must be remembered that we have only heard one side of the case. God has written all the books.

Samuel Butler

There is no finer investment for any community than putting milk into babies.

Winston Churchill

Men will confess to treason, murder, arson, false teeth, or a wig. How many of them will own up to a lack of humour?

Frank Colby

RURAL INDIA A PROGRESS REPORT

BY ANITA NARAYAN & SRIDHAR RAMAN

Rural India—thirty years of modest development have changed its outlook. And though the change has not been dramatic, it has been in its own quiet way significant and creditable. Deep pockets of poverty are still very much a familiar part of the scenario. Needless to say, the challenges ahead are daunting; but the mechanical capability and expertise that India has acquired in the last two decades should enable her to combat them with confidence. In these pages, we present an analysis of rural India's development in the social, economic, cultural and political spheres.

Agriculture is the mainstay of India's economy. It provides livelihood to 70% of India's population and constitutes 40% of the national income. In addition, inputs for 70% of the nation's exports come from this sector. Nearly 60% of India's teeming workforce is engaged in agriculture and allied occupations, viz. animal husbandry, poultry farming and forestry. Agriculture also supplies raw materials to leading Indian industries such as cotton and jute textiles, soap, sugar, food products and tea. Together, these agro-based industries account for 50% of the total income generated by the manufacturing sector.

India's record in the agricultural sector does not quite measure up to the high standards set by some of the world's top-notch performers in the field. Yet its achievements in the last three decades are phenomenal, considering the ruins in which the British left our rural economy (see Table A). Production of foodgrains has rocketed by 194%, oilseeds by over 50%, sugarcane by a staggering 207%, cotton by 117% and jute by more than 200%.

The most conspicuous gain of these years has been the conquest of famine. The post-independence annual growth rate of 2.7% and the fact that this rate has been consistently higher than the population growth rate of 2.1% explain India's steady march towards self-sufficiency in food. What propelled us towards self-sufficiency was partly the strategy of planned development adopted by India. In every five-year Plan, the Planning Commission fixed specific targets for each crop. It also charted out the programmes necessary for rapid agricultural growth, viz. irrigation, soil conservation, dry farming and land reclamation, supply of fertilisers, better ploughs and improved agricultural implements and propagation of scientific methods of cultivation. The government expressed its eagerness to ring institutional changes by setting up a wide network of community and agricultural development services. The use of land reforms, expansion of transportation, power, marketing and other key facilities like cooperative credit gave a powerful impetus to the agricultural sector and catalysed its growth. Since the Third Plan, growing emphasis has been laid on acquainting farmers with the latest developments in scientific research through concerted programmes like Intensive Agricultural Districts and High Yielding Varieties (HYV) programme.

The cumulative impact of all these steps swept India through phases of vigorous agricultural growth, the green revolution being the most notable of them (see Table B). The effect of the green revolution can be best seen in the fact that while between 1960-61 and

1980-81 the total area under cultivation rose by only 7%, production shot up by 40% and yield per hectare by 27%.

These achievements were also made possible by the government's efforts to develop a scientific temper among the villagers and in Indian agriculture as a whole. The figures speak: irrigated area 60m hectares in 1982-83 up from 2.6m hectares in 1950-51; consumption of fertilizers 64.2 lakh tonnes in 1982-83 taking off from 22.6 lakh tonnes in as late as 1970-71. An epoch-making technological breakthrough in spreading the cover of HYV resulted in the growth of area under HYV to 46.5m hectares by 1981-82.

While the achievements of the past are something to be proud of, the challenges of the future are overwhelming. For, as P.C. Joshi notes, "India was able to achieve an incremental output of 100m tonnes from 50m tonnes in 1950-51 to 150m tonnes in 1984-85, all in a period of 35 years. The country has now to increase its output by 70m tonnes over a period of only 15 years." For India's population is expected to grow at the rate of around 2.8% over the next 15 years or so. Indian agriculture, therefore, like Alice in Wonderland will have to keep running just to stay in the same place.

Land Reforms

At the time of independence India being a predominantly agrarian society, the rural sector received much attention from planners and politicians alike. The fact was highlighted that Indian society and economy being overwhelmingly rural was deeply related with the pattern of land organisation. Land not only constituted the major source of livelihood for the people, but also determined the system of social stratification, power structure, village and family organisation.

The landownership patterns prevalent at independence were those inherited from British rule and can be distinguished into three types:

Zamindari system: Revenue was collected by the Zamindar who acquired the status of a landlord. This system was greatly exploitative and asymmetrical in nature with the landlord controlling vast holdings at one end, and an ever increasing number of landless agricultural labourers at the other. In between, in varying degrees of sub-intendancy (hierarchy), were numerous intermediaries—tenants, poor peasants, sharecroppers, etc. The zamindari system was extensively found in Bengal, Bihar, North Madras and Varanasi.

Ryotwari system: Occupiers of small independent holdings paid revenue directly to the state. This system was largely found in Central India, Bombay and Berar.

Mahalwari System: Land was held in control by village communities who together were held responsible for the collection of revenue. This type of land ownership pattern was introduced in Agra, Avadh and Punjab.

Hence the land-ownership patterns at the time of independence presented a very dismal picture characterised by gross socio-economic inequalities and strong feudal elements. In 1951, 78% of the landholdings were below 10 acres, whereas 5.6% of the total holdings were above 25 acres.

It is due to the existence of this depressing state of affairs that the Planning Commission in 1952 gave concrete expression to the commitment to land reforms. It specified that the primary aims of the land reform programme were redistribution of land among the landless, establishment of individual holdings, security of tenure and bringing the cultivated land in to direct contact with the State. The general scheme of the programme consisted of the following features (a) abolition of intermediaries; (b) tenancy reforms; (c) land ceilings; (d) agrarian reorganisation; (e) organisation of cooperative farms.

The first phase of land reforms which was characterised by the implementation of the Zamindari Abolition Acts, 1951, emphasising the complete abolition of zamindari and large landholdings, can be said to be the only aspect of the programme to have achieved a certain measure of success, in the sense that it curtailed the zamindar's power to make arbitrary demands for services including *begar* (forced labour).

Many tenants were able to acquire secure land tenure, no longer being burdened by exorbitant rent demands. However, this by no means implies that the zamindars were the losers all the way. Due to the flexible terms of the Act, whereby the zamindars' *khudkash* land (personal cultivation) could be retained, it became possible for them to usurp land under the guise of 'personal cultivation', and so eviction of tenants took place on a large scale, with many becoming landless agricultural labourers. Further, due to inadequate or faulty land records, as in UP and Bihar, more land was seized under the same pretext. The percentage of absentee landlords (those residing in cities and having their holdings supervised by intermediaries) remained almost the same, many being political representatives of rural areas.

Tenancy reforms which aimed at the security of tenure, regulation of rent and conversion of tenants into owners also could not achieve their objectives. In many instances, even the land reform policies were not implemented by the states, as land reform, being a state subject,

was left to the independent discretion of the individual states. The tenants being poor and illiterate were also not aware of their rights and besides, due to their insecure position, were often subjected to large-scale evictions.

Land ceiling whose aim was the redistribution of excess land (taken from the landlord) among the landless also had as one of its principal objectives the conversion of tenants to owner-farmers. However, when the laws were enacted, they were once again riddled with loopholes and so failed to achieve their objectives. In the case of the Bihar Land Reforms Act 1961, though provisions were made for the landlord to retain *khudkash* land, in the same clause another statement read that if any land owner had not transferred excess land to heirs, he should do so within six months of the law's implementation! Land growing cash crops were also exempted from the ceiling law whereby an enterprising landowner in Madras converted his 20,000 acres of land under rice to sugarcane plantation! Hence, with all the loopholes, illegal transfers and paper partitions, the ceiling laws defeated the very purpose for which they were instituted. Gandhian movements like Bhoodan, Gramdan and Sampattidan which tried to achieve the same ends, after gaining some initial momentum failed to achieve their objectives.

The venture of cooperative joint farming which was floated to increase efficiency, provide more opportunities for the landless and finally result in a food surplus also, despite all good intentions, failed. In many instances, funds were allocated to non-existent cooperative joint farming societies, which led to the scrapping of the entire scheme. Countries where land reform programmes have been enforced strictly such as Japan and South Korea, have met with a tremendous measure of success.

In the Indian context, the land reform programme has been hardly satisfactory. Noted scholars such as P.C. Joshi have attributed this failure to the inconsistency between the ideology behind the programme and the legislation embodying it. Whereas the ideology of the programme was radical in nature being strongly anti-landlord and committed to the interests of the rural poor, the legislation was not correspondingly strong and primarily represented the interests of the intermediate classes such as the rich peasants. In the case of India, it is seen that land concentration was not radically changed but merely modified. Further, protection was not given to all types of tenants but only to those belonging to the upper strata of the tenancy. Besides the implementation and follow-up of the programme was delegated to the normal administrative channels of the government which had no time-bound programme and commitment. Barring some areas in UP where security of tenure was granted to some category of tenants, the tenancy reforms have been deemed a total failure.

On the whole, however, India's experiment with land reforms cannot be dubbed a total fiasco. The practice of *begar* (forced labour), debt slavery and illegal exactions are not as rampant as before. The Zamindari system has been terminated in almost all areas. Jammu & Kashmir, Kerala, West Bengal and UP are some of the states which achieved a certain measure of success in this programme.



**Harvesting a change.
Agrarian Structure**

As the Britishers had introduced three different types of revenue settlement patterns (Zamindari, Ryotwari and Mahalwari) in the country, the emerging agrarian relations also varied. The agrarian relations in West Bengal, characterised by the Zamindari system, was very different from that in Maharashtra under the Ryotwari system. After independence, different parts of the country developed different modes of production and again differing agrarian relations emerged.

Due to prevailing socio-economic conditions and the government's agricultural policy, economic development in rural India has been characterised by regional imbalances. Broadly speaking, in terms of economic development, India can be divided into five regions. First there is the semi-feudal eastern peripheral group consisting of Assam, Manipur and Orissa. Himachal Pradesh is included in this group. Second, the backward semi-capitalist group which includes UP, Rajasthan, MP and Jammu & Kashmir. Third, West Bengal and Bihar constitute the mixed semi-feudal and semi-capitalist group with some areas such as Burdwan and Purnea district being greatly developed, and others remaining grossly underdeveloped. Fourth, the developed capitalist north-west consists of Punjab and Haryana. Last, Maharashtra, Gujarat, Karnataka, Andhra Pradesh, Tamil Nadu and Kerala form the capitalist southern and western states, though in some districts of the eastern states, strong feudal elements in the agrarian structure still persist.

According to the amount of actual labour and the share in the product, the Marxist scholar, Daniel Thorner, has identified three principal classes in the Indian agrarian social structure—Malik, Kisan and Mazdoor. Being a

general outline, it does not present a comprehensive classification of the agrarian situation prevailing in the country where not only class considerations but even those of caste contribute to the diversity. Thus in Karnataka the Okkaliga caste, in Andhra Pradesh, Kammas and Reddis while in Haryana, the Jats and Yadavs own the maximum landholdings and, in terms of wealth and power, are the dominant castes. Yet many of these castes in other parts of the country are small peasants.

Similarly, before independence the nature of agrarian relations also varied from region to region. Thus in Punjab, where the nature of agrarian relations vary greatly from that in Bihar, a huge number of migrant labourers from Bihar and eastern UP are employed in field work, and though by Punjab's standards they are underpaid, yet they are paid much more than what they would receive in Bihar. Therefore, there exists in Punjab the rich farmer, the middle farmer and the migrant Bhari agricultural labourer. However, this exact classification cannot be applied to Bihar where a number of intermediaries still exist in different degrees of sub-infeudation between the landlord and the landless labourer and the problem of *begar* (forced labour) still remains. Further, whereas the rich farmer in Punjab works on the land with his own hands, this is not so in Bihar where non-involvement in agricultural work is symbolic of high status.

A significant development after independence has been the emergence of middle level castes such as the Ahirs, Jats, Kammas or Okkaligas who have greatly profited from the land ceiling policies. Newly acquired wealth has added to their landholdings which they have purchased from the higher castes. Absentee landlordism, earlier widely rampant throughout the country, has almost disappeared barring few exceptions like "gentleman farmers".

However, the post-independence period has not seen any improvement in the condition of the landless agricultural labourers, sharecroppers and small peasants. With the breakdown in the earlier paternalistic system of relations (where despite the tremendous exploitation of the traditional landlord, the rural poor did receive some security due to the landlord's patronage) even the little security enjoyed by the rural poor has been taken away, and the new agrarian relations have substituted it with nothing. The attitude of the aggressive middle castes towards these poor sections is one of callousness characterised by extreme exploitation and oppression.

Poverty Alleviation

While the per-hectare food production (yield) has steadily increased since independence and particularly in the wake of the green revolution (See Table A), the yields of all major cereals and cash crops, viz rice, wheat and cotton remain less than 30% of those obtained in the developed countries (See Table C). They are also well below the average world levels.

The per worker output is also low by global standards. The average productivity per worker for 1969-70 was only Rs 1,213 ranging between Rs 3,195 in Punjab and Rs 1,230 in UP. Significantly, even though land productivity is highest in Kerala, an average Punjab farmer earns more than his Kerala counterpart. This is because there are more men to a hectare in

Kerala than in Punjab. This shows that the biggest single influence on the economic condition of the rural people is the size of the agricultural population.

In India, a very large number of people live on agriculture. By 1971 the agricultural population had bloated to 383m from 163m in 1901. The tremendous pressure of population caused fragmentation of land. So intense was the pressure on land that despite a steep increase in the total area under cultivation since the turn of this century the area of cultivated land per cultivator (land per capita) fell sharply from 0.43 hectares in 1901 to 0.23 hectares in 1981.

The two related factors have inexorably driven the rural economy to the brink. The desperate scramble for land and the inability of industry to provide alternative employment are relentlessly pushing farmers into the swelling ranks of landless labourers. The last count put their number at 384m, and it is growing. These farmers have lost their incomes and the assets with which they could earn their incomes. They are among the most wretched and ajeet of the rural poor. It is these farmers who will have to be rehabilitated if at all rural India is to develop. This realisation prompted the government to launch the poverty alleviation programmes.

Following the failure of the Mahalanobis model to combat Indian realities, Indian planners shifted their emphasis from backing sheer growth to encouraging direct attacks on poverty through poverty alleviation programmes. These programmes followed two approaches: one, the area approach and two, the target approach. To the former belonged the Drought Prone Area Programme and to the latter programmes like the Small Farmers Development Agency (SFDA), Employment Guarantee Scheme, Food for Work Programme and Training Rural Youth for Self Employment (TRYSEM). In the Sixth Plan, the two approaches were combined into the Integrated Rural Development Programme (IRDP).

When it was launched in 1978, the IRDP was hailed as India's most comprehensive attempt at *garibi hatao*. In the last seven years, most of the hopes raised by the programme have been belied. Some of its cheeriest supporters have become its staunchest critics.

In 1978-79 the IRDP covered only 100 blocks. Later it was extended to 2300 blocks and finally on Oct 2, 1980 all the country's 5,011 blocks came under it. The Sixth Plan provided Rs 4,500 crores—Rs 3,000 crores in soft bank credits and Rs 1,500 crores in subsidies—for the task of raising 15m people permanently above the poverty line. Obviously, to qualify for IRDP aid, a family had to be under the poverty line, that is, have an annual income of less than Rs 3,500.

The implementation arm of the programme, the District Rural Development Agency, was assigned the crucial task of providing assets to landless labourers through the medium of subsidised assistance so that their earnings—by operating the assets—could forever transcend the poverty line. The objectives were laudable, but the same, unfortunately, cannot be said about the methods employed to implement them. No wonder, the IRDP managed to uplift no more than 8% of the 15m it was targeted at, and with more than twice this

number joining the ranks of the poorest of poor every year there is, if anything, more poverty now than there was in 1978. All reports cite corruption, centralisation, mismanagement and maladministration as the principal causes for the programme's ineffectiveness.

For a programme whose entire focus was to uplift the poorest of the poor, many of the beneficiaries were surprisingly well-heeled. Noted rural poverty analyst, Dr Nilkanth Rath says, "Except in Rajasthan and West Bengal beneficiaries were picked at random or under the duress of political pressure." The Public Evaluation Organisation (PEO) says that almost 3/4 of all houses chosen under IRDP were selected by petty officials and only 26% by gram panchayats. Not surprisingly this led to gross violation of the income limits. For instance, 1/4 of the lucky ones had an annual income of over Rs 3,500. With another 30% in the not-so-poor income bracket of Rs 2,500-3,500 walking away with a big slice of the cake, the poorest of the poor got only 1/6 of the bounty. Even the PEO report admits that at least 26% of the persons assisted were too well off to qualify. Significantly only 28% of the beneficiaries repaid the loans. Juxtaposed, these two figures mean that only an alarmingly small number of the targeted families were able to repay the loans. A feeling further reinforced by the PEO finding that 50% to 60% of the beneficiaries defaulted.

Many of IRDP's chronic deficiencies are due to its centralised structure. Rules and stipulations framed at the Centre are very often insensitive to local needs and conditions. The

TABLE A
Production of Selected Crops since 1950-51

Items	1950-51	1983-84
1. Foodgrains (m. tonnes)	50.8	149.8
2. Oilseeds (m. tonnes)	5.1	12.5
3. Sugarcane (m. tonnes)	57	175
4. Cotton (m. bales)	3.0	6.5
5. Jute (m. bales)	3.3	7.4

Source: Ministry of Agriculture, Annual Report 1983-84

allocation for all blocks, for instance, is the same though the extent of poverty and consequently the number of families below the poverty line (families with less than Rs 3,500 per year income) in no two blocks is alike. Resulting in a curious situation where one state has more money than it can use while another state is strapped for cash. Further, centrally determined goals and targets show little understanding of local limitations. Financial investment limits on different schemes fixed by the Centre are often impervious to the fact that the cost of implementing them fluctuates from state to state. Many a family has, therefore, ended up with money entirely insufficient for operating its enterprise profitably. Sets of programmes and projects are dealt out mechanically to beneficiaries without ever evaluating their background and managerial capabilities. The result is the same—a growing

legion of sick projects.

During the Sixth Plan period, IRDP's accent was on promoting cattle breeding by making cows available at heavily subsidised rates to the poorest. But in the absence of adequate backward and forward linkages such as cheap and easily available fodder, readily accessible veterinary services and milk marketing outlets, it became impossible for most of the families to operate the assets profitably. So the beneficiaries did the next best thing under the circumstances—they sold their cows. This represents a major failure of the programme.

TABLE B
Increase in land productivity in India (1961-82)

	(Kg/hectare)	
	1960-61	1982-83
Rice	1,013	1,230
Wheat	851	1,840
Maize	926	1,100
Groundnut	745	760
Sugarcane (gur)	4,613	5,620
Cotton	125	160
Potato	7,251	13,480

Source: Economic Survey, 1983-84.

whose central mission was to raise the families permanently above the poverty line by turning them into self-reliant entrepreneurs. Many anti-poverty programmes like the IRDP have flopped also because of the indifferent attitudes of the workers at the grassroots level, entrusted with the key task of executing the plans.

The emancipation of landless labourers is a must for the economic resurgence of rural India. Poverty alleviation programmes like IRDP, therefore, are essential; there can be no question of scrapping them. What, however, is called for is an imaginative and realistic effort to rid the programme of its many shortcomings. The government has recently announced several steps to reform the programme like changing the approach of uniformity for funding projects to achieve physical and financial targets to selectively based on incidence of poverty. If a state has a greater incidence of poverty, it will get bigger allocations and vice versa. The identification of beneficiaries will hence forth be ratified by village assemblies; package of assistance to ensure proper returns on investments is also being planned. This will provide the assisted families with the wherewithal to run their assets profitably. A new system of concurrent evaluation of current and two-year-old beneficiaries and a committee to review existing administrative arrangements for rural development are also to be introduced.

While these measures are in the right direction, certain other steps could be initiated to further strengthen implementation. It would, for instance, be rewarding to encourage voluntary agencies to participate in the implementation of such programmes. Voluntary agencies have often proved to be innovative, catalytic, capable of creating awareness, mobilising the underprivileged and motivating the downtrodden. Their more vigorous role in organising them for action is of crucial significance for building pressure from below. There is also a

case for reducing the allocations for IRDP during the Seventh Plan, and focussing resources on a fewer number of people. Says Swaminathan S. Aiyar, "Such an approach will have none of the excitement of the populist games that politicians play, but if it is adopted, poverty alleviation will be real, not just on paper."

Rural Politics

The politics of the rural hinterland significantly influences the distribution of power at the national level and also constitutes the base of the political structure in the country.

Formerly, before independence, political power was usually concentrated in the hands of the upper castes who were the locally dominant castes in their respective villages, i.e., the landowning caste which had the maximum economic clout. Significant examples are the Bhumias in Rajasthan, the Thakurs in UP, and the Brahmins in Tamil Nadu.

After independence, the base of the political structure changed substantially with the introduction of 'panchayati Raj' in the villages, whose aim was the granting of a certain measure of autonomy to the village community. Subsequently every village was represented by an elected administrative body called the 'Panchayat' which was headed by the 'Pradhan'. Subcommittees called 'Nyaya Panchayats', were also set up to look into legal issues.

In many regions, especially in south India, a perceptible shift in representation in these bodies was noticed from the upper castes down to the middle castes who had managed to acquire economic wealth.

In the north, however, political power remained, more or less, consolidated in the hands of the upper castes who managed to adapt to the changing situation although there are exceptions to this. The jats are a case of wealthy rural middle caste who have acquired political power in the north.

In south India, especially Tamil Nadu, the post-independence era heralded a remarkable change where after centuries of oppression, the lower castes expressed their deep resentment towards the higher castes through the anti-Brahmin movement which gained tremendous momentum due to the activities of the Dravida Munnetra Kazhagam (DMK) Party in Tamil Nadu. In the other southern states, such as Karnataka and Andhra Pradesh, the Okkaligas and the Kammas have emerged as powerful castes despite low positions in the caste hierarchy.

It is natural to wonder why in the post-independence era, this difference in the power structure between north and south India developed. One of the primary reasons is that the oppression of the lower castes in the south was more austere, and in many ways more humiliating than in the north. Thus lower caste members were forbidden to wear shoes or live in brick houses, and even their women were prohibited from wearing upper garments. Hence intense hatred of the upper castes especially Brahmins gave rise to the anti-Brahmin movement in the south. In the north, though oppression was widespread, the humiliating practices of the south were not so severely imposed and further political power was not concentrated in the hands of Brahmins alone but dispersed among other upper castes such as Thakurs and Rajputs.

With change in landownership patterns and

agrarian relations, agrarian conflict has also become a common feature in rural areas. The Naxalbari movement in north Bengal in the mid-sixties which aimed at forcibly changing the land ownership patterns and triggered off a wave of uprisings in Bihar, Andhra Pradesh, Tamil Nadu and MP is a case in point.

The interesting thing to note in agrarian conflict is that they not only articulate but, also reflect class loyalties, which is in certain ways a more important parameter for determining the nature of present conflicts.

Education

Since independence the number of schools has increased from 2.3 lakhs in 1951 to 6.9 lakhs in 1981—a 300% growth—while the number of children enrolled in class I has shot up from 2.83% crores to 11.4 crores—a 400% rise. Yet the literacy rate has crawled up by a mere 20%, from 16.1 to 36.17% (See Table C). This is partly explained by the explosive population boom from 383m to 684m in the last three decades. The other reason is the high "dropout" rate. Over 60% of all children who join schools drop out of them before entering class IV—considered the minimum for acquiring functional literacy. India's pathetic literacy record is particularly well manifested in the educationally backward states, viz. MP, Assam, Orissa, Andhra Pradesh, West Bengal, Bihar, UP, Jammu & Kashmir and Rajasthan. MP typifies the many maladies that afflict India's educational system—high dropout rates, low retention rates, woefully scarce resources, irrelevant and outdated curricula. The problems are the same throughout India, only the degree is different.

Nearly three-fourths of children in the age group 6-14 in MP grow up as illiterates, despite a three-fold increase in the number of

points vary from state to state, they are broadly the factors responsible for the muddle that is India's education.

Since economic and social planning began in 1951 India has been confronted by four major tasks concerning universal elementary education, viz. provision of educational facilities within easy walking distance from the home of every child, enrolment of all children in the compulsory education age group of 6-14, retention of enrolled children and improvement of quality of education at the elementary level. Of all these, only the second objective of enrolling all children has been achieved to some extent and even this gain has been largely negated by the high dropout rate. As far as the other tasks are concerned they remain largely undone.

The geometric increase in the number of primary schools from 2,09,671 to 5,03,741 has brought one primary school within the walking distance of every child; however, in the absence of basic facilities most of these schools are serving no meaningful purpose. There is a dire need to revamp these schools and furnish them with at least the essential facilities. In India, education has for long received a low priority. The expenditure on education currently is about 3% of its GNP. The allocation on education must be raised to at least 6% of the GNP even if it means diverting resources from other development activities. For education is and has always been the continuum and the basis for the development of human society.

In India large sums of money will have to be channelised into the stream of education both for erecting new facilities and equipping existing schools with proper amenities. For at least two reasons: one, the constitutional obligation to provide basic education to all citizens and two, the proven finding that investments in elementary education yield the highest rate of return and have a significant impact on productivity, the largest amount of money needs to be funneled into elementary education. And if in a country like India, with a massive illiterate population, it is not feasible to impart education through traditional modalities such as class room teaching and text book material, then we must plough greater funds and resources into developing non-formal methods of disseminating knowledge including television. For, if the rates of growth of literacy and population remain what they are, India will step into 2000 AD with 50 crore illiterates—5.1% of all illiterates in the world.

While no amount of money or resource spent on reforming education is too much, merely erecting schools and facilities is not enough. It is necessary to create in the rural areas socio-economic conditions in which there is a demand for them. In many ways schools represent an alien culture to poor families in rural areas and so they do not send their children to them. Rural communities engaged in farming, see no purpose in giving their children the type of education which will make them scorn working with the hands.

They are justified. Today countless young people leave schools, colleges and universities with an elitist veneer, they regard even the most gratifying of manual activity as inferior to the meanest and most routinised of clerical work.

This must change radically. The vocational content in education must be enriched,

TABLE C
Literacy in %
(1901-1981)

Year	Persons	Males	Females
1901	5.35	9.83	3.60
1911	5.92	10.56	1.05
1921	7.16	12.21	1.81
1931	9.50	15.59	2.93
1941	16.10	24.90	7.30
1951	16.67	24.95	7.93
1961	24.02	34.44	12.95
1971	29.45	39.45	18.69
1981	36.17	46.74	24.88

schools and a six-fold increase in the number of enrolments. This is because 70% of MP's children and 60% of children throughout the country are daily abandoning schools before even learning the rudiments of reading and writing, the reasons being poverty and illiteracy of parents, low priority to elementary education, meagre funds, lack of basic infrastructural facilities like school buildings, teaching aids and equipment and large scale absenteeism among teachers. About one-third of the 60,000 schools in the state are run in open air and around half of them are one-teacher schools. Basic teaching aids like chalks, slates, blackboards, text books and exercise books are in chronic short supply or entirely unavailable. While figures with regard to each of these

curricula should encourage pupils to respect and take pride in work. It would be, for instance, more wise and useful to teach a rural child what to do in case of a bad harvest than lecture him on the history of British India.

Further school holidays are timed to accommodate urban preferences, not the work cycle of agrarian life. This discourages parents to send their children to school and thereby lose their services during sowing and harvesting seasons. Holidays must coincide with periods in the year when the need for labour in the field is the greatest.

Besides, many rural families simply cannot afford the cost of first putting their children into school and then meeting the recurring expenditure of educating them. To attract and retain children in schools, incentives like free uniforms, textbooks and, mid-day meals should be, as a rule, worked into the rural education system.

Rural Women

Over 70% of Indian women live in rural areas. The typical picture of a rural woman that is conveyed to the urban mind is of a simple, hardworking, unsophisticated woman enjoying a certain degree of independence due to her individual earnings. However, this is only an incomplete and superficial picture. Rural women are besieged by innumerable problems and rural development programmes should give attention to this group.

The Female literacy rate in India is one of the lowest in the world—only 25% women are literate. Kerala has the highest literacy rate for women in rural areas while Rajasthan has the lowest. Although most rural women are engaged in agricultural work and at construction sites as contract labour, yet they suffer from severe unemployment and also under-employment. Although the life expectancy of women has gone up since independence, yet

the burden of repeated child-bearing, malnutrition and the drudgery of work still exact a heavy toll on the life of the average woman in the rural areas. Further, due to ignorance, illiteracy and socio-economic inertia they are unable to benefit from the health services, family planning, etc that are open to them (see *CCTimes*, Aug '85, *Population: Its Various Dimensions*). The low status of women due to child-marriage, dowry, purdah and other oppressive social customs keeps them in an inferior position and certain development projects have been undertaken for women in rural areas. The Kasturba Gandhi Memorial Trust which concentrated on education, health activities and socio-economic programmes such as *Khadi* and village industries was one of the earliest agencies to give definite direction to women's development in rural areas. The Central Government with UNICEF aid, introduced the scheme of Family and Child Welfare Project (F & CWP), an integrated programme to impart welfare services to women and their children in the fields of childcare, nutrition, health, and home-management. Assistance was also provided by mahila mandals and voluntary agencies. The Integrated Child Development Services (ICDS), begun in 1975, provided a network of 'anganwadis' projects, which provided mobile crèches for children, health and nutritional services for both mothers and their children. A particular method of teaching through the theatre medium using the 'Phad' (scroll) to educate adult women in rural areas has also been undertaken. An attempt to provide employment opportunities to women through cottage industries has also been made.

However all these measures though they have achieved moderate success still in no way combat the myriad problems faced by women in rural areas sufficiently, and it is only by a stronger commitment to this cause can the desirable progress be attained.

emerged as the greatest beneficiary of the changes that have taken place. The low castes, though they are still very poor, are no longer subjected to exploitative practices like 'begar'.

Why has India's land reform programme, despite ambitious objectives, failed to benefit the rural poor?

Land reform is not an abstract concept but must be looked at from the point of view of the interests of a particular group. For the middle level castes, land reform has been a definite success. They have acquired land not only from the land reform policies but also from market purchase. Now these 'new rich' castes have no traditional obligations towards the low castes as was characteristic of the traditional rich castes and oppress them even more severely. Though in some states such as Kerala, Karnataka and West Bengal some degree of equitable distribution has taken place, on the whole the rural poor have not benefited much. One of the primary reasons for this is that when a social upheaval occurs, the poorest sections are motivated to join the struggle with certain promises, yet once the new powers are in the saddle, the middle group does not want to share the benefits with the lower ones.

In the present day, for understanding rural conflict, which would you suggest is more crucial—caste or class factors?

I have my own view of this. If you go to the village and get the point of view of the victim of a political conflict you will find that caste and class factors are not isolated factors. The 'new rich' such as the rising middle castes make use of the instruments of both caste and class to further their own interests. Though earlier caste had some elements of a protective nature, now it is increasingly used as a mechanism for exploitation. An emerging class is a multi-caste phenomenon, and many class battles are fought in the guise of caste battles. Violence against Harijans is not because they are Harijans, but only by keeping them suppressed as a reserve army of labour can the upper castes prosper.

What suggestions would you give to make India's rural development programmes more productive and effective?

The difficulty with the rural development programmes is that while there is one programme for growth, there is another to fight poverty—anti-poverty programmes. These different orientations work at cross-purposes, neither helps the other. Hence the two must be suitably combined. Policies should be formulated with a definite emphasis on the small or marginal farmer. Besides, all crop cultivation problems cannot be solved. Forestry, dairy, poultry and rural industrialisation are other sources that need to be tapped. Rural investment programmes providing opportunities for the rural rich to invest their wealth, which otherwise will be dissipated must be provided. The problems posed by the wealth acquiring middle peasantry—the rural *nouveau-riche*, which is extremely aggressive towards the rural poor at whom it directs the bulk of its oppression need serious attention.

Hence there is a tremendous gap between economic and social change, where social and cultural change is sadly lagging behind. This needs to be bridged.

A.N

AN AGRARIAN RENAISSANCE

Dr P.C. Joshi, doyen of the Institute of Economic Growth, University of Delhi has written many important books and made several notable contributions to national and international journals on subjects related to economic development. In the following interview, Dr Joshi makes an incisive analysis of India's rural development policy, changing agrarian structure and suggests ways for making India's rural development more effective.

After 38 years of independence how would you review the patterns of change that have come over rural India?

Firstly, let me state that it is a matter of perspective the higher and lower classes viewing the trend of change in contradictory ways. The traditional rich classes such as zamindars, talukadars and jagirdars who have lost their control of land, monopoly over power, and also their supreme prestige, the 'ancient regime' of the landed gentry, will say that a revolution has taken place. The lower castes who were below them in the hierarchy are now in principle their equals and even their competitors. However for the poor castes and Harijans, not much has

really changed in the objective world. Although in terms of thoughts and beliefs there has been tremendous change, in the material world of property, education or wealth, their lot is hardly better than before. For these people there is a tremendous gap between vision and reality, promise and upliftment.

From the historical perspective we find a break from colonial stagnation. Before independence, the rate of population growth was greater than the rate of food growth. Recurrent famines, chronic starvation and widespread hunger was the usual situation. After independence, India has witnessed tremendous development in some regions such as Punjab. The green revolution has brought about a boom in wheat output. The rural economy has been transformed into a production-oriented economy.

The agrarian situation has also experienced remarkable change. The non-cultivator landlord who thrived on the exorbitant rates extorted through rented land has been replaced by the large owner-cultivator. It has not been possible for the tiller at the bottom to become the owner. The middle caste rural peasantry has

NEWS IN BRIEF

BY SANJUKTA BANERJI & SHYAMALA M. IYER

Nine months of national and international happenings—from January right through till September '85... all compiled and condensed for the Bank (PO) and other forthcoming exams.

INDIA

AWARDED

Padma Vibhushan to Prof M.G.K. Menon, physicist and Prof N.R. Rao, Director, Indian Institute of Science, Bangalore. The **Padma Bhushan** to Bhimsen Joshi, musician; S. Varadachari, noted scientist and Director, Council for Scientific & Industrial Research; Gurbaksh Singh, the then Vice-Chancellor, Delhi University and 18 others. The **Padma Shri** to film personalities Naseeruddin Shah and Smita Patil, **Mridangist** Palghar R. Raghu, Olympian P.T. Usha, World Snooker Champion Om Agarwal and 35 others.

Kalidas Samman Award for 1985, carrying a cash prize of Rs. 1 lakh to Kumar Gangadhar for his "excellence in musical performance by synthesising tradition with innovation."

B.C. Roy Award for 1984, carrying a cash prize of Rs. 50,000 and a silver salver to the late PM Indira Gandhi, for statesmanship of the highest order, Dr Satish Dhawan, former Chairman of the Space Commission and Dr C.L. Jha, a Bombay obstetrician and gynaecologist, in the category of eminent person in science and medical man-cum-statesman, Dr B.K. Anand and Dr K.S. Sanjiv, in the category of eminent medical man.

UN Secretary-General's Peace Medal to internationally renowned Indian sculptor, Amar Nath Saxena for his work *The Crushing Burden*.

B.D. Goenka Awards for 1984, with a cash prize of Rs. 1 lakh instituted by the *Indian Express* Group of Newspapers to R.K. Keswani, a freelance journalist of Bhopal for his investigative piece on the Union Carbide; to Prem Bhatia, Editor, *The Tribune*, for his outstanding contribution to journalism.

C.V. Raman Award for research in physical sciences for 1981 to S.S. Chandrasekhar, Raman Research Institute, Bangalore; for 1982 to Asima Chatterjee of Calcutta University; the **Meghnad Saha Award** for research in theoretical sciences for 1981 to S.M. Alladion of Osmania University; for 1982 to R.P. Rastogi of Gorakhpur University; and the **J.C. Bose Award** for research in life sciences for 1981 to M.A. Viswamitra, Indian Institute of Science, Bangalore. Instituted by the University Grant Commission (UGC).

World Health Organisation Sasakawa Health Prize for 1985 jointly to the Society for

Education, Welfare and Action (SEWA) of rural district Bharuch in Gujarat, Dr Jesum C. Azurim of the Philippines and Dr David Berch Ecobar of Columbia.

1985 Asan World Prize for Literature to noted Indo-Anglian poetess Kamala Das, the first Indian to receive the prize

Lenin Peace Prize for 1983-84

posthumously to Mrs Indira Gandhi for her outstanding contribution to preserving and strengthening of peace. Sharing the honours are Vietnamese Vice-President Nguyen Huo Tho, West German public figure Joseph Weber, French scientist Jean Marie Legat, Colombian writer Lyujis Vidales and Swedish public figure Eva Palme.

Dadasaheb Phalke Award for 1985, carrying a cash prize of Rs. 1 lakh, to Satyajit Ray.

1985 Nehru Fellowships to social scientist Han Krishna Paranjape, geologist Shitindramohan Naha and playwright C. Shankar Pillai.

Nehru Award for Engineering and Technology for 1983 with a cash prize of Rs. 1 lakh to Satish Dhawan, former Chairman of the Indian Space Commission, and Raja Ramanna, Chairman of the Atomic Energy Commission. The award for social sciences went to former Planning Commission member K.N. Raja.

Nehru Award for Sciences for 1983, carrying a cash prize of Rs. 1 lakh and a citation, to M.G.K. Menon, Member, Planning Commission.

US Presidential Medal of Freedom, America's highest civilian award, to Mother Teresa, in recognition of her work among the poorest of the poor in the world.

Jnanpith Award for 1984, carrying a cash prize of Rs. 1.5 lakhs, to Malayalam writer Thakazhi Shiv Shankar Pillai.

Jawaharal Nehru Award (1985) for strengthening Indo-Soviet friendship to academicians V.A. Kotelnikov, novelist Chinghiz Aitmatov, orientologist G.K. Shirokov and Indologist L.V. Mitrokhim.

Jamnalal Bajaj Awards (1985) carrying a cash prize of Rs. 1 lakh to veteran Gandhian and former parliamentarian T.S. Avinashalingam (outstanding contribution in the field of constructive work); Sanjit Roy of Tilonia village in Rajasthan (application of science and technology for rural development) and Amtai Wagh of Kosbari, Maharashtra, a prominent social worker (outstanding contribution to the welfare and uplift of women and children).

UNESCO's Education for Peace Prize (1985) to India's Gen Inderjit Rikhye for his work through the World Institute for Peace, New York; and East Germany's Georg Eckert Institute, for organising international meetings

on school books.

Dadabhai Naoroji Memorial Prize for contribution to the development of science and scientific institutions in India to H.N. Sethna, former Chairman, Atomic Energy Commission.

Ramon Magsaysay Award (1985) for International Understanding to Murlidhar Devdas Amte.

APPOINTED

Dr M.S. Sanjeevi Rao, former Deputy Minister for Electronics, as the Chairman of the Electronics Commission.

Arjun Singh, CM of MP as the Governor of Punjab replacing K.T. Satarawalla.

P. Venkatasubbaiah, former Minister of State for Home as the Governor of Bihar, replacing A.R. Kidwai.

Mohammad Usman Ari, former Deputy Minister for Works and Housing, as the Governor of UP, replacing C.P.N. Singh.

Pranab Mukherjee, the former Finance Minister as the President of the West Bengal unit of the Congress(I), replacing Ananda Gopal Mukherjee.

P.C. Alexander, former principal secretary to the PM as India's next High Commissioner to Britain.

Justice P.N. Bhagwati, as the Chief Justice of the Supreme Court of India succeeding Y.V. Chandrachud, who retired on Jul 12.

L.K. Jha, former Chairman of the Economic Administrative Reforms Commission, as Adviser to the PM on administrative reforms, with effect from Jul 11.

D.A. La Fontaine, Air Marshal, as the new Chief of Air Staff with the rank of Air Chief Marshal, succeeding L.M. Katre, who died in office on Jul 1.

K.K. Mathew, former Supreme Court Judge, to head the commission of inquiry constituted by the government to determine the specific Hindi-speaking areas of Punjab which shall be transferred to Haryana in lieu of Chandigarh.

D.A. Desai, retired judge of the Supreme Court, as Chairman of the reconstituted Law Commission.

D.M. Mishra, Director-General of the Central Reserve Police Force, as Director-General of the Central Industrial Security Force.

M.L. Wadhawan, member (anti-smuggling) in Central Board of Excise and Customs, as Director-General of the newly formed Central Economic Intelligence Bureau.

S.S. Barnala, as CM of Punjab on Sep 29.

M.H. Beg, former Supreme Court Judge, as head of Minorities Commission.

Y.V. Chandrachud, as head of the commit-

tee examining the constitutional aspects of the Assam-Meghalaya border question.

Justice A.N. Sen of the Supreme Court as Chairman of the Press Council.

Ashok Gehlot, former Union Minister of State for Tourism and Civil Aviation as President of the Rajasthan PCC(I) replacing Naval Kishore Sharma.

ELECTED

M. Thambi Durai, 38, of the AIADMK, as the youngest Deputy Speaker of the eighth Lok Sabha.

Najma Heptulla, of the Congress (I), as the Deputy Chairman of the Rajya Sabha.

Balram Jakhar, Speaker of the seventh Lok Sabha, re-elected unanimously to the office by the eighth Lok Sabha.

M.L. Fotedar, political advisor to the PM, to the Rajya Sabha in a by-election from the UP Assembly constituency.

H. Sterken, as President of the Inter Parliamentary Union (IPU), defeating Balram Jakhar by a mere five votes.

VISITED

Jigme Singye Wangchuk, King of Bhutan, on a four-day state visit, beginning Feb 1.

Maumoon Abdul Gayoom, President of the Maldives, on a one-day visit, Feb 5.

Wojciech Jaruzelski, Polish PM, Feb 11-15, on a state visit.

Mickey Mouse, the famous cartoon character created by Walt Disney 80 years ago, was in New Delhi, Feb 22, as part of a goodwill tour of the world.

Milka Planinc, Yugoslav PM, Mar 18, on a day's stopover.

Sam Nujoma, President of the South West African People's Organisation (SWAPO), Mar 25.

Mrs Margaret Thatcher, British PM, Apr 13, on a day's official visit.

David Russell Lange, New Zealand PM, Apr 15, on a brief stopover.

Guo Qinglan Kotnis, ageing Chinese widow of the legendary Dr Dwarkanath Kotnis, Apr 1, on a three-week visit to India.

Julius K. Nyerere, President of Tanzania, Aug 24, on a four-day visit.

Sridath Ramphal, Commonwealth Secretary General, Aug 24, on a four-day state visit.

King Birendra Bir Bikram Shah Dev, of Nepal and his wife Queen Aishwarya on a three-day state visit, Sep 18.

PEOPLE

Mohammed Ajeeb: Son of a peasant farmer in Chhatro, Kashmir, elected Britain's first Asian Lord Mayor, as the Mayor of Bradford.

Dr Salim Ali: Famed ornithologist nominated as member, Rajya Sabha.

U.N. Bachhawat: Chairman of wage boards for working and non-working journalists.

B.G. Deshmukh: Chief Secretary to the Maharashtra State Government to inquire into Bombay's Dharavi land scandal.

J.P. Gupta as Chairman, Railway Board, succeeding K.T. Raghavan who has retired.

J.R. Hiremath: India's permanent represen-

tative to the UN Industrial Development Organisation (UNIDO) elected as one of the three vice presidents.

S.P. Jagota: Former Additional Secretary in the Ministry of External Affairs elected as Chairman of the International Law Commission, Geneva.

H.K.L. Kapoor as Chairman of the Union Public Service Commission (UPSC).

Mohan Katre: Special Inspector-General of Police, Maharashtra as the Director, Central Bureau of Investigation.

P.K. Kaul: Former Finance Secretary appointed Cabinet Secretary.

Justice D.N. Kripal: Judge of the High Court, as to head of the commission of inquiry set up to probe the Kaniskha crash that killed 329 people off the Irish coast on Jun 23.

R.N. Malhotra: India's Executive Director at the IMF, as the new RBI Governor.

Justice R.N. Mishra: Judge of the Supreme Court, as head of the commission constituted to hold a judicial inquiry into the Delhi riots.

Prakash Narain as Chairman of the Railway Board.

Amol Palekar: Noted film and stage artist as Chairman of the Children's Film Society (CFS).

Col. N. Pant: Director of the Sriharikota Rocket Launching Station, as Director, Indian Space Research Organisation.

D.N. Patodia: Elected President of the Federation of the Indian Chambers of Commerce and Industry (FICCI).

R.D. Pradhan: Maharashtra's Chief Secretary as the new Union Home Secretary.

N.S. Randhawa: Appointed Director General of the Indian Council for Agricultural Research (ICAR).

U.R. Rao: Appointed Chairman of the Space Commission.

S.S. Sidhu as Secretary, Department of Tourism and Civil Aviation.

Dr Nagendra Singh: The first Indian to be elected to the Presidency of the International Court of Justice, The Hague.

S.D. Srivastava as Secretary in the Department of Industrial Relations.

S. Venkitaraman as Finance Secretary.

B.G. Verghese: Editor, *Indian Express*, elected President of the Editors Guild of India.

PLACES

Anuradhapura: Was the scene of some of the bloodiest carnages in the history of the Sri Lankan ethnic crises. On May 14 the Tamil Tigers ruthlessly gunned down 150 Sinhalese Buddhists.

Assam: On Jul 18 Assam CM Hiteswar Saikia revoked the Assam Disturbed Areas Act, 1955 and the Armed Forces (Special Powers) Act, 1958, with immediate effect.

Deeg: During the campaigning for the Assembly elections, on Feb 21, Man Singh, an independent MLA and a member of the royal family of Bharatpur was shot dead in an encounter with the police, along with two of his supporters. The controversy raised by the killing forced the Rajasthan CM S.M. Mathur to resign.

Maharashtra: Celebrated its silver jubilee on May 2.

Manipur: On Feb 19, extremists of the

National Socialist Council of Nagaland (NSCN) attacked an army convoy killing 15 security personnel — 13 army jawans and two village volunteer force members. This is the second major ambush in the recent history of the insurgency movement.

Merapani: Thousands of people fled from this town on Assam's border with Nagaland in the wake of clashes between the security forces of the two states.

New Delhi: Was the scene of two international meets. On Jun 28, the heads of states or governments of six nations — India, Argentina, Greece, Mexico, Sweden and Tanzania — got together to express the world's growing concern over the nuclear arms race. On Apr 20, an extra-continental meet of the non-aligned countries co-ordinating bureau was held to demonstrate solidarity with oppressed Namibia.

Sherpur: Punjab village where Sant Harchand Singh Longowal was assassinated.

Thimpu: The Sri Lankan Government officials and leaders of six Tamil militant groups met in Bhutan's capital in a vain bid to thrash out a lasting solution to Sri Lanka's ethnic problems.

Mizoram: A barbed wire fence will be erected to prevent the influx of Chakma tribals into Mizoram from the adjoining Chittagong hill tract.

Bhopal: The MP Government has prepared a Rs 322 crore plan to develop Bhopal on the pattern of the Japanese city of Hiroshima as part of the state's relief and rehabilitation measures for the victims of the Carbide gas disaster. It envisages, among other things, introduction of electric trolley buses for city transport and development of recreational and health care facilities.

ECONOMY

The import-export policy, valid for three years (1985-88), has allowed 210 items of industrial machinery to be imported under the Open General License (OGL), abolished the category of automatic licensing, introduced a new import-export pass book scheme and also a two-tier policy for import of computers and computer based systems. Satellite communication has been included in the computer software export scheme.

The new electronics policy provides for liberalised licensing and a bigger role for the FERA and MRTP companies and Indian companies with foreign equity upto 40%. The idea is to increase electronics production to Rs 10,000 crores in 1989-90.

The new liberalised textile policy has reduced the number of sectors to two, instead of three — the handloom sector and the powerloom sector. To improve the performance of the handloom sector, the policy provides for the modernisation of looms, increase of yarn supply, encouragement of production of mixed and blended fabrics on handlooms, and the reservation of handloom articles for exclusive production.

Drug policy: 82 essential and mass consumption drugs as well as their formulations have been delicensed and their manufacture has been opened to all sectors of the pharmaceutical industry.

Aid India Consortium: Responding to a

strengthen Rome's spiritual ties with the African Church. There are about 77m Catholics in Africa.

Li Xian'an, the Chinese President, visited the US and Canada; this was the first-ever visit to these nations by a Chinese head of State.

Franz Josef Strauss, leader of the Bavaria-based Christian Social Union met the East German Communist Party Chief Erich Honecker during the Leipzig trade fair. This was a sign of rapprochement between the two Germanies.

RESIGNED

Gerard Bolla, one of UNESCO's two Deputy Directors.

Rashid Karami, as PM of Lebanon. His one-year old government had been torn by crises and had been unable to make any progress towards national reconciliation.

David Stockman, as the US Director of Office Management and Budget. He had been one of the leading figures behind the so-called "Reagan Revolution" in America.

OVERTHROWN

Gaafar Nimeini, President of Sudan, in a coup of the Sudanese armed forces led by the Commander in Chief, Gen Abdul Rahman Suwar Al Dahab. The new regime also suspended the Constitution, imposed martial law and dissolved the Sudanese Socialist Union, the country's only legal political party.

Applo Milton Obote, President of Uganda in a coup led by Commander Bazilio Olara Okello.

Maj Gen Mohammad Buhari by Ibrahim Badamsi Babangida, Nigerian Army Chief of Staff, without bloodshed. Buhari had himself toppled the government of former President Shahu Shagari in 1983. The present coup is the sixth in Nigeria's history since its independence in 1960.

SUMMITS

The **eleventh economic summit** of the leading industrial nations (the US, Japan, West Germany, France, Britain, Italy, Canada, along with representatives of the European Community) was held at Bonn in May. The main goal of the Americans was to start a new round of talks in early 1986 aimed at liberalising world trade. President Mitterand of France blocked Reagan in achieving this goal.

Chancellor Helmut Kohl of West Germany and President Mitterand of France met at Brivan on the West German-Swiss border for a summit in June. Although there were disagreements on Washington's Strategic Defence Initiative and on trade and agricultural policies, the two agreed on the French-sponsored Eureka project which aims at European technological cooperation.

Helsinki Summit: Thirty-five delegations met at the Finnish capital, Helsinki in August to mark the 10th anniversary of the agreements on security and cooperation in Europe known as the Helsinki accords. These included U.S. Secretary of State, George Shultz, and Soviet Foreign Minister, Eduard Shevardnadze, who met for the first time.

The **leaders of the 21 member League of Arab States** met at Casablanca in August and

agreed to send ambassadors to mediate between several leading Arab states including Syria and Iraq and to condemn Iran for its role in the five-year-old Persian Gulf war. Syria, Lebanon, South Yemen, Algeria and Libya boycotted the summit and some others were not represented by the heads of state.

The **16th annual South Pacific Forum** heads of government of 13 countries met at Rarotonga, the capital of Cook Islands. They agreed on a pact that would make the South Pacific a nuclear free zone.

EVENTS

EUROPE Britain

The 51-week-long strike of the National Union of Mine workers (NUM) ended in March as the members' resolve began to crumble in the face of PM Margaret Thatcher's unwillingness to meet their key demand, the end of a British Government plan to close unprofitable mines. The dispute had resulted in 14 deaths, 9,808 arrests and an estimated \$3 b in lost output and other economic consequences.

Trouble of a different nature brewed again in August as BBC news programming was silenced for the first time in 63 years as its employees went on a one-day strike as a protest against the BBC's decision to cancel the showing of a TV documentary on Northern Ireland, *At the Edge of the Union*, following objections raised by Thatcher's Government. It had featured an interview with Martin McGuinness, an alleged leader of the Irish Republican Army (IRA).

Later in the month an aircraft of British Airways flying from London to the island of Corfu exploded on the run-way killing 54 persons. Miraculously, 83 others survived.

France

President Mitterand's Government was involved in a crisis in the summer of 1985 which may have an adverse effect on the socialists' prospects in the legislative elections scheduled for next March. On Jul 10, the flagship of the Greenpeace environmental movement, Rainbow Warrior, was sunk in Auckland (New Zealand) harbour. Fingers pointed towards French involvement, as the ship had been preparing to lead a protest against French nuclear testing in Mururoa Atoll in the South Pacific. A police investigation in New Zealand revealed that French agents had been involved. A stream of Press revelations in France reinforced suspicion that President Mitterand and his advisers had played a role in the scandal which came to be known as the "Underwatergate affair". The President ordered an inquiry and Bernard Tricot repented shortly afterwards that agents had been sent to New Zealand to spy on the ship but had not been involved in the bombing. The Press and the public were not satisfied and Defence Minister, Charles Hernu and the Chief of the Foreign Intelligence Operations, Vice Admiral Pierre Lacoste, were forced to resign. After that PM Laurent Fabius went before national TV and admitted that the ship had indeed been blown up on the orders of Hernu and Lacoste. But this did not clear public scepticism. Poll taken in late September indicated that 52% of the French people believed that Mitterand and Fabius both knew

beforehand about the plan to blow up the ship and 78% of those polled condemned the decision to sabotage it.

W. Germany

The country was shaken by a major spy scandal when Hans Joachim Tiedge, a senior official in West Germany's counter intelligence agency, responsible for ferreting out East German spies operating in West Germany, defected to the East. His defection was preceded by the disappearance of one Sonja Luvsburg, who worked for Minister Martin Bangemann, Ursula Richter, a book keeper for a Bonn-based lobbying group for German refugees from Poland, Czechoslovakia and the Soviet Union, and Lorenz Betzing, a close friend of the Richters, who are believed now to be East German spies. A large number of persons, allegedly spies, were rounded up after Tiedge's defection. These include Margaret Hoke, a Secretary for the past 21 years in the office of the Federal President and Reinhard Liebetanz, an associate of Tiedge and head of the counter-espionage unit against right-wing radicals.

In June, far away from Germany, a drama was going on in Brazil, which has close connection with Germany's history. A 25-year long hunt for the Nazi war criminal, Dr. Joseph Mengele, climaxed when his remains were dug up from the cemetery of a small Brazilian town called Embu. The man who had sent 400,000 people, mostly Jews, to death at the Auschwitz-Birkenau concentration camp during World War II, had apparently spent the last years of his life quietly in Brazil. Brazilian forensic experts were almost certain that his remains (bones and teeth) matched his available medical records.

Belgium

Thirty-eight people died and 425 were injured during soccer riots at Brussels' Heysel stadium, just before the final match for the European Soccer Cup Championship between Turin's Juventus and Liverpool, in early June. The Liverpool fans were responsible for the riots and 31 of those killed were Italians.

Denmark

Two explosions occurred in Denmark in late July, one at the Copenhagen headquarters of Northwest Orient Airlines and the other at Denmark's oldest synagogue in the old city district of Copenhagen. 27 persons were injured in the blasts. The Islamic Jihad, a Shiite Muslim umbrella terrorist organisation took responsibility for the explosions. A telephone caller told Agence France-Presse (AFP) in Beirut that the bombing had been carried out by a Scandinavian cell of the organisation in retaliation for an Israeli attack on the Lebanese village of Qabribha.

European Community

The Treaty of Accession, which will officially bring Portugal and Spain into the European Community in January was officially signed in Lisbon and Madrid in June. In Spain, however, celebrations of the event were cancelled after Basque terrorists killed four persons in three different incidents. The ETA which wants a separate Basque State has long been opposed to the European Community as a "capitalist conspiracy".

Gibraltar

In a symbolic ceremony in February, a gate which had separated Spain from the loyal

British colony of Gibraltar for 16 years, was unlocked. The opening of the gate was a precondition for the holding of talks between Britain and Spain over the future of the Rock. Talks, in fact, were held shortly afterwards between British Foreign Secretary, Sir Geoffrey Howe, Spanish Foreign Minister, Fernando Moran, and Gibraltar's Chief Minister, Sir Joshua Hassan at Geneva.

Italy

The "trial of the century" began in June when Mehmet Ali Agca, convicted of attempting to kill Pope John Paul II in 1981, arrived in a Rome high security courtroom. He and seven other defendants were standing trial, four of them in absentia, on charges related to an alleged conspiracy. Earlier, Agca had maintained that he had acted alone and initially at one courtroom he claimed that he was Jesus Christ and announced the end of the world. But later he changed his tune and suggested that Bulgarian Defendant Sergei Antonov may also have been at hand. He also said that a Turk named Akif had also been present during the assassination attempt. He implicated the Soviet Union, Bulgaria and a secret Italian Masonic lodge. Antonov, however, denied that he even knew Agca.

In July, disaster struck the country when two earthen dams north of the vacation town of Stava in the Dolomite mountains suddenly collapsed. About 200 to 250 people were killed and 100 injured.

Poland

In February, Grzegorz Piotrowski, a Polish secret police captain, was sentenced to 25 years in prison for the murder of Father Jerzy Popieluszko in October 1984. Two of his subordinates, Leszek Pekala and Waldemar Chmielewski, received 15 and 14 years respectively. Adam Pictruska, a former colonel, who denied Piotrowski's accusations that he encouraged the killing was given a 25-year term. The Politburo and the Central Committee also forced Gen Miroslaw Milewski, the man in charge of the security police at the time of the slaying of Rev Popieluszko to resign. The trial discredited the state security apparatus and suggested the possibility of a plot by communist hardliners against Gen Jaruzelski's leadership.

However, this did not mean that Jaruzelski was becoming soft in his attitude. Shortly after the trial, three Solidarity leaders, Bogdan Lis, Adam Michnik and Wladyslaw Frasyniuk were arrested at Gdansk and charged with attending an illegal mutiny in which decision was to be taken on a strike to protest a proposed increase in food prices. Activists Lech Walesa and Jerry Trzcinski were also picked up but later released. The other three were given prison terms ranging from 2½ years to 3½ years in June. Last year 600 political prisoners had been granted amnesty, but since then about 100 activists have been arrested, according to the dissidents.

SOUTH ASIA

Pakistan

Shahnawaz Bhutto, the son of former PM Zulfikar Ali Bhutto was found dead in Cannes on Jul 18, and this spawned rumours of political intrigue, including the possibility of murder. He was buried in the family burial ground at

Garhi Khuda Baksh and his sister, Benazir Bhutto, the leader of the dissident Pakistan People's Party (PPP), returned to Pakistan from London, where she had been residing since her release from house arrest in 1984. Fearing trouble in Bhutto's home province of Sind, President Zia-ul-Haq placed his forces on military alert there and also placed many PPP leaders under house arrest. Later, Benazir, too, was put under house arrest in Karachi in late August.

In the constitutional field, there were changes in early March, when Zia announced several amendments to Pakistan's constitution by which the President will be able to dissolve the Parliament at will and will be the arbiter of powers under the Constitution. Later in the month, after the elections to the National Assembly, Zia assumed the mantle of an elected President with martial law still in force.

Afghanistan

Fighting continued through the first nine months of 1985. On Jun 12, 20 Soviet built Mig fighters were blown up on the ground in the Shindand air base in western Afghanistan. This amounted to one-fourth of the Afghan Government's air force, but it was not known whether it was the work of the Mujahideen resistance fighters or rebellious members of the Afghan military. The death of 12 Soviet prisoners in blasts at a refugee camp near Peshawar also implicated Pakistan, which had so far claimed that Soviet prisoners were not being held on Pakistan soil. In fact, the Russians alleged that the prisoners had been killed by regular Pakistani troops when they had taken over a mujahideen ammunition dump in a bid to escape. In July the mujahideen launched an attack on a Soviet military air base outside Kabul, the heaviest attack since Soviet troops marched into Afghanistan six years ago. In late August-early September, however, the Russians launched a massive counter offensive on the Afghan border provinces of Paktia and Nangarhar and broke through mujahideen lines on the border.

Nepal

Nepal was rocked by bomb blasts in July as explosions occurred in Kathmandu, Bhairawa, Danghadi and Pokhara. An unknown group called the Samyukta Mukti Bahini claimed responsibility. One hundred and twenty five people were arrested including leaders of the outlawed Nepal Congress Party and the Nepali Communist party. This was the first major act of political terrorism in Nepal.

Bangladesh

Lt Gen H.M. Ershad first relaxed martial law, eased censorship and even agreed to hold parliamentary elections before the vote for President. But after the opposition alliances made demands to end martial law, Ershad reimposed full martial law in March, re-instituted censorship and postponed parliamentary elections. Opposition leader Khaleda Zia and Hasina Wazed were put under house arrest and Ali Ahad and other political activists were taken into custody. He then held a referendum on his policies and programmes. About 50% of the population voted, and Ershad claiming that 94% had voted in his favour, took it as an endorsement of his policies and continued to remain in power. Early in April, he withdrew all the concessions he had earlier offered to the opposition parties for their participation in the

parliamentary poll which was cancelled.

In early June, a cyclone ripped through coastal Bangladesh taking 15,000 lives. It devastated seven districts in southern Bangladesh and affected nearly 5m people. The island of Urichar was stripped clean of people and property alike.

Sri Lanka

Sporadic fighting continued even as intermittent attempts at peace were made. One of the worst slaughters occurred in May when Tamil Eelam guerrillas hijacked a bus, entered the mainly Sinhalese city of Anuradhapura and killed about 100 people. The Sinhalese retaliated by killing 39 Tamils in Jaffna.

There were two rounds of peace talks at Thimpu, Bhutan, in July and August. But both were exercises in diplomatic futility. On the fourth day of the first conference, an apparent attempt on the life of President Jayewardene by three men claiming to be members of the Eelam Revolutionary Organization of Students, was thwarted by the police. On Jun 18, the government had drafted a ceasefire agreement, but it has been violated repeatedly by both sides.

FAR EAST

China

Deng Xiaoping's attempts to modernise China received a further boost at the beginning of the year, when the traditional two-hour lunch break was cut down to one hour. In an article published in February in the journal *Outlook* Communist Party General Secretary, Hu Yaobang, blamed "radical leftist nonsense" for communism's failure to meet the economic goals set in 1949 and emphasised China's new economic philosophy stressing incentives and rewards. In May, in furtherance of this policy, the government lifted price controls in Peking on more than 1,800 food items, thus raising their costs by some 50%. It was also announced that Peking's 5.5m residents would receive a subsidy of 7.5 yuan a month (15% of per capita income) for a year to help pay for the higher prices.

In September, Deng carried out a political tour de force, dislodging almost all his opponents from the party leadership and replacing them with younger, better-educated and more pragmatic people of his choice. Six new members were added to the Politburo, which was reduced from 24 to 20 seats, and three new full members were included in the eleven-person Central Committee Secretariat of the Communist Party. The Chinese Communist Party also had a meeting in September in which 992 delegates were present. The conference approved a draft of a new five-year economic Plan, which reflected Deng's modernisation drive.

On the military front, it was announced in April that the People's Liberation Army be cut back by 1m men and women by the end of 1986. At present it has 4m regulars, supported by 4m Basic People's Militia and 6m Ordinary People's Militia.

Japan

P.M. Yasuhiro Nakasone tried to persuade Japan to liberalise its trade policies first in April

when he urged his countrymen to "buy foreign" and then in August when he appeared before national T.V. to say that his government was taking new steps to open the home market. His plan consisted of 87 measures, which designed to make it easier for foreigners to sell goods in Japan. Under it, Japan promised to reduce or remove tariffs on about 1,853 industrial and agricultural products, as well as to introduce measures to ease import procedures. This was in response to a "Japan-bashing" trade legislation pending in the US Congress.

In August, Japan suffered its quota of air disasters when Flight 123 of Japan Airlines flying from Tokyo to Osaka crashed into a mountain killing 520 people.

Taiwan

A political scandal followed the murder of Chinese-American writer Henry Liu at his home in Daly City, California, last October. He had been a persistent critic of the Kuomintang rule and had recently published a biography critical of President Chiang Ching-Kuo. His murder, said to be politically motivated, was interpreted as a warning to other Chinese Americans not to criticise the Taiwan government. In April, Chen Chi-li, the former leader of Taiwan's Bamboo Union gang and Wu Tun, a gang member, were found guilty of the murder and sentenced to life imprisonment. Meanwhile, a Taiwan military court charged Vice Admiral Wang Hsi-ling, the former head of Taiwan's military intelligence bureau and two of his aides guilty of ordering and plotting the murder. While the first was given a life sentence the aides were each given 2½ year jail terms. However, neither the civil nor the military court tried further revolutionaries out of those charged in the case. However, in the course of an appellate review in June it was revealed that a younger step-brother of the President, Gen Chiang Wei-Kuo, may have been involved in the plot.

Philippines

The Aquino trial continued through 1985. First business woman Rebecca Quijano claimed that opposition leader Benigno Aquino was shot while descending the airplane stairs by a man in khaki. In July, another passenger in the plane, Pelagia Hilario, claimed that he was shot by a man in blue. This version clashed with the finding of the Agrava board, a five member citizens' panel that concluded that Aquino had been killed in a military plot, but supported the government's contention that he was killed by a long community gunman. In September the Supreme Court threw out testimony by Gen Fabian Ver, the armed forces Chief of Staff, currently on obligatory leave and seven other military men about their alleged role in the 1983 assassination. The disputed testimony had been given to the Agrava panel last year. The court's decision would probably lead to the acquittal of the military men.

In August the opposition in the Filipino National Assembly launched an unprecedented resolution to impeach President Ferdinand Marcos on charges that he and his family and friends have enriched themselves at the country's expense. Although the motion was defeated, the opposition vowed to take their cause to the people. In another surprise development in August, the National Assembly began debate on a resolution that is aimed at denying the US access to its Philippine military

installations, the Clark Air base and the US naval station at Subic Bay.

THE PACIFIC

New Caledonia

Violence erupted in January between the French settlers (Caldoches) and the native Melanesians (Kanaks) who seek independence after 131 years of French rule. When a French settler was killed near the capital Noumea, about 1,000 Caldoches rioted. Meanwhile, French special envoy, Edgard Pisani, outlined a plan under which New Caledonia would become a sovereign nation, yet remain bound to France by a special "treaty of accession". President Mitterand toured the territory later in the month to show support for Pisani's proposals. In France, French lawmakers met in August in a special summer session to vote on a modified government plan to create a New Caledonia Territorial Congress that would oversee the transition to a popularly voted independence in "association with France". The Socialist majority in the National Assembly carried the vote 284 to 204. However, tensions ran high between the Kanaks and the Caldoches.

New Zealand

PM Lange stuck to his vow to close the country's ports to all nuclear-armed or nuclear powered ships and in February refused a routine US request to allow an American naval vessel to call on New Zealand during the scheduled Sea Eagle naval exercises to be held in March. Six thousand demonstrators marched in support of Lange's policy in Auckland.

Questions were raised about the future of the ANZUS, the regional defence pact, as Australian PM Bob Hawke announced in March that the annual ANZUS meeting scheduled for Canberra in July, would be postponed, since the US Secretary of State George Shultz decided not to attend it. The US retaliated by cancelling operation Sea Eagle and threatened to deny to Wellington certain regional intelligence, some of which was collected at bases in Australia.

SOUTH-EAST ASIA

Indonesia

The country celebrated its 40th anniversary of independence from the Netherlands in August. Earlier, in May, President Suharto's government controlled Parliament passed legislation making it mandatory for virtually all social and political organisations to adopt the state ideology of *Pancasila*, which is a set of five principle calling for belief in God, justice, national unity, democracy and humanitarianism. But critics say that combined with press censorship, the law has been used to stifle all political dissent.

Vietnam

Vietnam celebrated its 10th anniversary of the end of the Vietnam war in May with a parade in Ho Chi Minh city. From July to September, the country also showed signs of friendliness towards the US. Le Duan's Government announced in July that it would return the remains of 26 American servicemen listed as missing in action (MIA) during the war. Further, it said that it would assist the US in preparing a satisfactory accounting of the fates of an estimated 2,464 MIAs. In September, although it

did not agree to a joint effort by the US and Hanoi, it showed its goodwill overtures. Vietnam has also agreed to an increase in the number of annual visits by US technical experts searching for remains. Foreign Minister, Nguyen Co Thach, also offered to support negotiated power sharing in Kampuchea between Prince Norodom Sihanouk, and the Hanoi backed regime of Heng Samrin, but only after a retreat into exile could be arranged for the Khmer Rouge leader, Pol Pot.

Kampuchea

The year began with a Vietnamese dry season offensive on the country. Their main move was against the Khmer Rouge, especially on the Thai border. By February, more than 40,000 civilians normally under Khmer Rouge control spilled into Thailand, while the Khmer guerrillas dug deeper into Kampuchea. The foreign ministers of the Association of South-East Asian Nations (ASEAN) met at Bangkok and made an unprecedented appeal to the "international community" for "support and assistance to the Kampuchean people" in the "military struggle" to oust their country's Vietnamese occupiers.

Under pressure from Thailand and China, the Khmer Rouge announced the retirement of Pol Pot in September. He was replaced by Son Sen, who had a more acceptable international reputation.

Thailand

On Sep 9, an abortive coup attempt was made to topple the Prem Tinsulanonda Government by a disgruntled former army colonel, Manoon Roopbhachoran and his brother Air Force Squadron Leader Manas. Four people including two journalists were killed during the violence and 59 injured.

AFRICA

Kenya

In July-August, a two phase conference to mark the end of the UN Decade for Women was held at Nairobi. The first meeting was Forum '85, a meeting of non-governmental organisations (NGOs) and the second was the official UN conference. At the end, a final paper, *Forward Looking Strategies*, was adopted unanimously.

Ethiopia

It was a terrible year for Ethiopia, as famine ravaged the country. About 850,000 Ethiopians left for Sudan, which itself was suffering from drought. About 8m people were affected in Ethiopia. The government of Lt Col Mengistu Haile Mariam tried to deal with it through foreign relief as well as a scheme which planned the relocating of 2m Ethiopians from the ravaged farmlands of the north to the more sparsely populated but fertile regions of the south-west. However, his government also had to face other problems in the form of a major offensive launched against it by guerrillas of the Tigre People's Liberation Front in May. However, one major source of relief later was the Live Aid concert orchestrated simultaneously in London and Philadelphia in July to collect funds for relief work in Ethiopia. Besides earning \$7m from ticket sales and merchandising and \$7m from TV and broadcast rights, millions more came in from donations after the concert.

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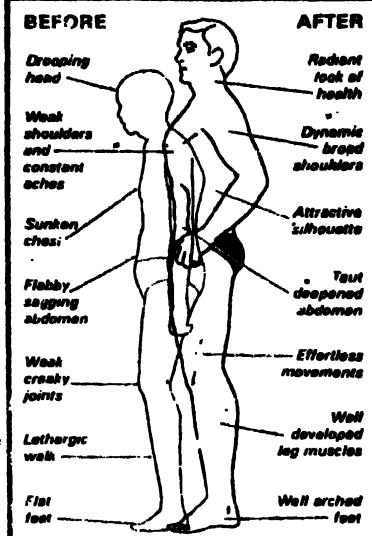
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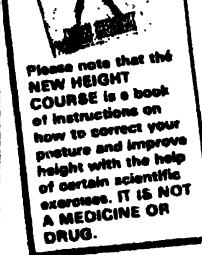
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South Africa

South African troops attacked 10 suspected African National Congress (ANC) bastions in Botswana in June, killing 14 persons. Pretoria justified the attack by claiming that Botswana had been giving asylum to ANC guerrillas. South African troops also entered Angola twice in May-June to search for South-West African People's Organisation (SWAPO) guerrillas and left many dead.

Violence escalated thereafter in South Africa and the President Pieter Botha clamped a state of emergency on 36 districts in the Eastern Cape provinces, Transvaal and Johannesburg. The UN Security Council adopted a resolution supporting global sanctions against the Pretoria regime. France froze all new investments in South Africa and withdrew its ambassador from Pretoria. The European Community also recalled its envoys for consultations and called for the release of Nelson Mandela, the jailed African National Congress (ANC) leader. It also sent a fact-finding mission to the country. In September, the Reagan Administration which had so far been following a policy of "constructive engagement" bent to pressures from the US Congress and mounting violence in South Africa. It imposed, by executive order, a series of sanctions against South Africa, banning most new loans to Pretoria, prohibiting export of most nuclear technology, and the sale of computers to South African security agencies and import of Kruggerand gold coins.

As violence waxed and waned, Botha set out to make peacekeeping reforms in the system of apartheid. Earlier this year, the government decided that mixed marriages and sexual relations between whites and non-whites would no longer be forbidden. In September, Botha declared that citizenship would be granted to blacks living in the country's urban areas but who are nominal citizens of the four "independent" homelands in South Africa. A presidential commission also recommended to Botha the scrapping of influx control regulations (or pass laws) by which the movements of the blacks have been controlled since 1952.

CENTRAL AND SOUTH AMERICA

Chile

A killer quake shook the country in March leaving about 200 dead and 2,000 injured. It stretched for more than 1,000 miles, from its epicenter, near the village of Algarrobo, and measured more than 8 on the Richter scale.

Mexico

Tremor after tremor shook Mexico in September leaving about 6,000 dead and 30,000 injured. The worst affected was Mexico city. The US National Earthquake Information Service announced that the great quake registered 8.1 on the Richter scale. This was the earth's worst earthquake in decades.

Nicaragua

The US imposed an embargo on US-Nicaraguan trade, suspended service to the US of Nicaragua's airline and vessels flying the Nicaraguan flag and notified the country of Washington's intention to terminate the 1956 Treaty of Friendship, Commerce and Navigation between the two countries in May. The

Reagan Administration also tried a number of times to win the congressional release of \$14m in US assistance for the contra rebels who are fighting against the Sandinistas, but was unsuccessful. The Nicaraguan President Ortega made a symbolic gesture by visiting Moscow, some East European countries as well as some West European countries in an effort to open a rift between the US and Western Europe over the trade embargo.

The Sandinista Government also continued its war with the contras, who mounted a specially vigorous attack in August on La Palmita, Esteli and La Trinidad. Managua hoped to divert attention from these attacks by raising warnings of an impending US invasion.

El Salvador

The spirit of La Palma where President Jose Napoleon Duarte and leftist rebel leaders met last October, was replaced by renewed fighting. On Jun 13, rebel leaders attacked sidewalk cafes in San Salvador killing 13 people. They warned that this was only the beginning. Later in the year the President's daughter was kidnapped, but no group claimed responsibility. There were also rumblings that the war may spill into Honduras. On Aug 29, Honduran soldiers entered a UN refugee camp for Salvadorans in Honduras and killed two people, injured others and arrested ten on the ground that the camp sheltered Salvadoran rebels. The Salvadoran rebels threatened to attack across the border.

SUPERPOWERS USA

A police raid on a radical cult known as Move in Philadelphia turned into a tragedy in May. The police had planned to fire bomb the headquarters of the cult and force the inhabitants out, but the fire became an inferno and wiped out the entire neighbourhood.

In another disaster in August, Delta Air Lines Flight 191 burst into flames as it tried to land at Forth Worth airport, Dallas. Thirty-one persons of the 160 aboard survived the crash.

Terrorists also struck at the US in different parts of the world. In Beirut Shiite Amal militiamen hijacked TWA Flight 847 in June, took 40 male American passengers off the plane and hid them in the city. In San Salvador, six Americans were killed when anti-government rebels struck at roadside cafes.

At home, there was a spy scandal. In May-June, John Walker, a private detective and retired Navy communications specialist, his son Michael an operations clerk aboard the US craft carrier Nimitz and his brother Arthur, a retired Navy lieutenant commander and an engineer for a defense-contracting firm in Virginia, were arrested and charged with spying and delivering classified documents to Soviet agents. President Reagan faced a personal crisis when after surgery it was discovered that he had cancerous cells in his colon. Although surgery to slice out two feet of his colon in July had apparently removed the malignancy, doctors did not rule out the possibility of its recurring in some other part of his body.

Soviet Union

Oleg Gordievsky, officially a Soviet embassy counsellor in Britain, but actually a senior operative of the KGB, defected to Britain in September. Shortly afterwards, Britain expelled

25 Soviet diplomats, trade officials and journalists whom Gordievsky had identified as spies. The Soviets retaliated by expelling 26 British diplomats, businessmen and journalists from Moscow.

East-West

Hopes of a new dialogue between the two sides started early as after a meeting between Soviet Foreign Minister, Andrei Gromyko and US Secretary of State, George Shultz, in January, the two countries decided to hold a dialogue on arms control. Negotiations began in Geneva in March and has continued on its up and down course. After Mikhail Gorbachov became the Soviet Communist party leader, President Reagan showed a certain amount of eagerness for a summit which was later fixed for November.

In April, Gorbachov announced a freeze on Soviet deployment of intermediate range missiles in Europe till November and invited the US to do the same. He also proposed a freeze on strategic offensive arms and a moratorium on the development of space weapons while arms negotiations are under way in Geneva. The US rejected the Soviet offer. In fact, the Reagan Administration persuaded the Senate to allot \$1.5b for construction of 21 more MX missiles and continued its experimentation on the Strategic Defence Initiative (SDI), which on a number of occasions in the past, had obstructed East-West talks.

Late in September, Soviet Foreign Minister, Eduard Shevardnadze, met Reagan in Washington and presented a new arms control plan as well as a personal letter from Gorbachov. Details of the plan were not clear in October but it appeared that the Soviets would move towards the US position on reducing offensive nuclear weapons if the Americans severely limited their programme of ultra modern Star Wars missile defenses.

MIDDLE EAST Israel

Falashas or Ethiopian Jews were airlifted from Sudan to Israel in January. This was condemned by Ethiopia as illegal and a gross interference in its internal affairs. Thereafter, the Sudanese Government ordered a halt to the airlift codenamed Operation Moses and the Brussels based charter airline which was ferrying the Falashas suspended its operations. Later in the year, the Falashas were again in the news because many of them alleged that they were being discriminated against in Israel.

In the same month, Israel announced a step-by-step withdrawal of an estimated 22,000 Israeli troops from southern Lebanon, where they had been since the Israeli invasion of June 1982. The first stage, which involved the movement of Israeli troops from the front-line positions they had held since 1982 to new locations 17 miles south, was completed on Feb 18. In May, the army began to withdraw from the southeast sector of Lebanon and it was completed in June.

Lebanon, Syria and other Arab countries

Various attempts were made to bring peace to the region. In the beginning of the year Saudi Arabia's King Fahd visited Washington and tried to interest it in using its influence for peace

(Continued on page 68)

RAJIV'S FOREIGN TOUR IMPRESSIVE PERFORMANCE

British authorities unearthed a plot to assassinate PM Rajiv, on the eve of his departure for the UK, on his first official visit. For Rajiv this news must have come with a sense of *deja vu*, for shortly before he left for the US some months earlier, the Americans, too, had discovered a similar plot. Already the British authorities have rounded up about a dozen Pakistanis and Sikhs under the Prevention of Terrorism Acts including four Pakistanis from Pak-occupied Kashmir believed to be leaders of the Jammu & Kashmir Liberation Front (JKLF) and nine Sikh activists of the International Sikh Youth Federation. With the result that UK too, like the US, made the tightest security arrangements ever for any visiting foreign dignitary, for the Indian PM.

While reaffirming UK's support for the stability and unity of India, the British PM Margaret Thatcher decided to extend the scope of the Suppression of Terrorism Act to cover hostile activities carried out by terrorists against India. This Act aims at preventing terrorists and extremists from stalling extradition proceedings in courts on the plea that their actions were based on political reasons. Mrs Thatcher, in a surprise move, also expressed Britain's preparedness to amend Section 5 of the Act which would enable British authorities to take cognizance of crimes against India provided India, too, would amend its Anti-terrorist Act accordingly. This British proposal of a new extradition treaty could go a long way in curbing terrorist activities and extradition of people committing crimes against India and seeking political asylum in UK. Of late India had been urging UK to take action against those who incited violence. Britain is now contemplating bringing this aspect under the purview of this Act, too.

Besides this the two leaders had wide ranging talks on bilateral and international issues before proceeding to Nassau, the capital of Bahamas, to attend the five-day Commonwealth Heads of Government Meet (CHOGM) which was attended by 46 heads of state and government. Once again Rajiv gave a creditable performance on the international scene at the CHOGM summit. The main focus of the summit was on Pretoria's racist regime although other principal concerns of world leaders such as world poverty and the nuclear threat were also covered. While most of the nuclear nations came out with strong criticism of South Africa's racist regime, Mrs Thatcher, not surprisingly, refused to agree on the economic sanctions suggested by most member countries. For the UK has vested strategic and economic interests in South Africa which it is reluctant to jeopardise.

In a major initiative to break the ensuing stalemate and one which received international applause, the Indian PM held emergency discussions with four other leaders—the PMs of Canada, Australia, Zambia and Zimbabwe—in an attempt to evolve a strategy aimed at ending apartheid, while accommodating the British viewpoint. This group, known as the ginger group, was perhaps instrumental for CHOGM (including Mrs Thatcher) giving the South African regime the ultimatum to start dismantling apartheid or else face a programme of voluntary sanctions. Mrs Thatcher also suggested that all the 49 member nations of CHOGM should take unilateral action to preclude the import of South African Kruggerand gold coins.

From Nassau Rajiv flew to New York to attend the 40th anniversary of the UN. He had a series of fruitful talks with several world leaders

including US President Ronald Reagan, President Zia-ul-Haq of Pakistan and PM Zhao Ziyang of China. While his talks with the first two leaders centred around India's concern over Pakistan's nuclear programme, his talks with the latter two are believed to have touched upon the sensitive border issues, too.

Upon leaving New York PM Rajiv Gandhi made a brief 11-hour stopover at Holland where he had talks with the Holland PM, R.F. Lubbers, on bilateral issues like trade, industrial collaboration and transfer of technology. On his return journey the Indian PM made a short unscheduled stopover at Moscow which took political observers the world over by surprise. Apart from discussing global issues, particularly disarmament and bilateral issues, with the Soviet leader Mikhail Gorbachov, Rajiv is believed to have briefed him on the decisions taken at the CHOGM summit and his talks with world leaders. And on the eve of the Reagan-Gorbachov Geneva summit, Rajiv is believed to have expressed India's grave concern over the nuclear arms race. Meanwhile Western analysts are skeptical about the surprise visit and are busy speculating whether there is more to it than meets the eye.

PUNJAB

GOING SOFT ON EXTREMISTS

The Barnala Ministry has extended its full support to the cause off extremism in the state. Not only has it adopted a soft approach towards terrorists but has also constituted a four-member committee under Ajit Singh Bains, a former judge of the Punjab and Haryana High Court, for the quick release of persons convicted or facing prosecution for criminal offences registered against them since Aug '81 or arrested in connection with the political agitation in the state. Already the committee has recommended the release of over 2,000 detainees of which 309 have been released. It has even recommended the release of hardcore extremists.

Perhaps there is some connection between the release of extremists and the spurt in terrorist activity in the state. Among those killed in October were Rainal Kadd, General Secretary of the Congress unit in Fatehgarh Churian and Ram Lubaya, President of the Tarn Taran municipal committee.

In his first meeting with PM Rajiv Gandhi since assuming the office of CM Barnala expressed his misgivings on the terms of reference of the Mathew Commission constituted by the Centre to determine the territory which should go to Haryana in lieu of Chandigarh.

The Rajiv-Longowal accord had laid down three criteria for determining this territory. According to these a village would be taken as a unit and its linguistic character, contiguity and other factors would determine where it should go. The Akalis are basically objecting to the expression "other factors" as they feel it is ambiguous.

The bickering among the Akalis has also not subsided. The Baba Joginder Singh-led United Akali Dal is demanding the immediate implementation of the Anandpur Sahib Resolution. The SGPC President, Gurcharan Tohra, is doing nothing to hide his ambition of becoming the President of the Shiromani Akali Dal—a post held by CM Barnala at the moment. Tohra's opposers are, of course, against this as they feel that it will widen the rift between various factions of the Dal. Meanwhile the All India Sikh Students Federation (AISSF) has broken all links with United Akali Dal.

The Barnala regime has, however, instilled hope in the people of the troubled state. For, Barnala has shown himself receptive to ideas and suggestions from the Centre and has assured the PM that his government will work for peace and progress in Punjab and unity and integrity of India.

ASSAM

ALL SET FOR THE POLLS

The Assam accord has created confusion about the status of the 1966-71 entrants to the state. These people who have now been declared foreigners will lose their voting rights for the next 10 years. However, the ambiguity in defining their status is now coming in the way of implementing various provisions of the accord. The Home Ministry, in consultation with the Law Ministry, is now trying to find a way to safeguard the rights of the affected minorities.

Meanwhile the All Assam Students Union (AASU), the party largely

JNANPITH AWARD

Thakazhi Sivasankara Pillai, the eminent Malayalam writer became the 20th recipient of the prestigious Bharatiya Jnanpith Award this. Instituted by the late Shanti Prasad Jain and his wife Rama Jain this award has achieved such eminence over the years that it is often called the Indian Nobel Prize for Literature. It carries a citation, a bronze cast replica of Vagdevi and a cash prize of Rs 1.5 lakhs.

Pillai is the third Malayalam writer to have won the Bhartiya Jnanpith. Over the past 50 years as a writer, Pillai has contributed to various genres of Literature. His best known work is *Chemmeen*.

This year the selection panel included Shriyans Prasad Jain, President Bhartiya Jnanpith, Ashok Jain, its managing trustee and P.V. Narasimha Rao, Union Minister for Human Resources, among others.

responsible for the Assam accord, has now decided to promote a regional political party keeping in view the forthcoming Lok Sabha and Assembly elections in the state. A three-day political convention at Golaghat organised by the AASU resulted in the formation of the Assam Gana Parishad (AGP). Basically a merger of two main regional parties—the Assam Jatiyatibadi Dal and the Purbanchaliya Loka Parishad, the AGP's 39-member executive has a sizeable chunk of ex-AASU members including AASU General Secretary Bhriagu Phukan and President Prafulla Mohanta. This shifting of loyalties by AASU members is a calculated move. For, according to indications, the AGP has already gained a wide following.

However, the minority backing is obviously not behind the AGP. And the minorities constitute a substantial percentage of the populace. The battle of the ballot will therefore be hard fought.

Meanwhile the AASU and AAGSP have come out with a series of suggestions for speedy industrial and economic development of the state. These include immediate clearance by the Planning Commission for the Subansuri dam project. This multi-purpose project proposed to be located in Ghoghamukh would generate an estimated 4,800 Mw of hydel power. The setting up of a gas cracking unit to use presently flared and wasted natural gas from oil fields in upper Assam, the establishment of an aromatic complex and at least two cement plants each with a capacity of 1,000 to 1,500 tonnes per day and the extension of the broad gauge railway line in upper Assam to touch major towns of the Brahmaputra valley have also been proposed.

However, the major need of the hour is the effective resolution of any discrepancies over the accord. For the revision of electoral rolls have now been completed on the basis of Mar 24, 1971, as the cut-off year. After the polls, however, a new revision for eliminating names of all those who migrated to Assam between Jan 1, 1966 and Mar 24, 1971 will begin in accordance with the terms of the accord. The Election Commission has announced the date for the polls. On Dec 16, 1985, elections for the 14 Lok Sabha and 126 Assembly seats will be held simultaneously.

The ruling party is planning to contest all the Lok Sabha and Assembly seats in Assam. But, with the AGP presenting a formidable opposition it will have to bank heavily on the minority votes.

INDIA-SRI LANKA

SHIFTING STANCES

The Sri Lankan Government's stance towards Tamil militants is in a state of flux these days. One moment they are conciliatory and the next moment hostile. Early this month the government agreed to a few contentious points to facilitate an agreement on the ceasefire monitoring committee. These include expanding the committee to induct new members including some from the list suggested by the Eelam National Liberation Front (ENLF) to Indian Foreign Secretary, Romesh Bhandari. The committee would also be free to receive representatives from the citizens committee as well as determine its own procedures and report its findings directly to the President.

It had also been decided at the time the committee was formed that camps would be intimidated about the timing of its surprise visits, in advance. The ENLF had strongly objected to this since, according to it, this prior information would make the surprise visits meaningless. However, the authorities did not concede to this vital point of contention.

The ceasefire has, (thanks to a slight softening of the Sri Lankan attitude) been extended indefinitely albeit theoretically only. For, the orgies of violence and bloodshed continue on both sides. In fact the Tamil militants are not receptive to the idea of a ceasefire monitoring committee. On the committee's two-day visit to the predominantly Tamil town of Jaffna it was greeted by a series of bomb blasts. Neither are the Sri Lankan authorities themselves adhering to the ceasefire regulations. Rather, the monitoring committee has been explicitly instructed not to interfere with security forces operations against Tamils. This gives them the privilege to continue with their atrocities on Tamils with impunity.

Sri Lankan President Jayewardene himself is not very sure about the approach he should adopt. Of late he has been making concerted efforts to convince the Sinhala Buddhist hardliners that only a political solution can resolve the ethnic crisis. And at the same time he has been passing statements designed to antagonise the militants. Recently he remarked that he would bring the liberation groups to book. The Peoples Liberation Organisation of Tamil Eelam (PLOTE) retaliated by disclosing its intention to overthrow the Jayewardene Government. "That is our

avowed policy and it is no crime to try and overthrow state terrorism." Another militant group, the Tamil Eelam Liberation Front has stated that the Eelam organisations will form a government-in-exile.

Liberation Tigers of Tamil Eelam (LTTE), the most powerful of the militant groups, is holding out against any settlement that falls short of a separate state for the Tamils. Meanwhile undaunted by these setbacks, India continues to play the role of a pacifying mediator. And has once again sent out invitations to the six Sri Lankan Tamil groups for talks in New Delhi. However, as it has been proved time and again, it would be futile to pin any hopes on these talks.

INDIA-BANGLADESH

SHARING OF WATERS

Nassau served as a stage not only for the CHOGM summit but for some very useful talks between India and Bangladesh as well. It was here that PM Rajiv Gandhi and President Ershad of Bangladesh reached an understanding on the question of sharing of the Ganga waters at Farakka. Under this agreement between the two leaders, the irrigation ministers of the neighbouring countries are to sign a memorandum of understanding for the sharing of these waters for a three-year period commencing from the dry season of 1986. This new memorandum of understanding which will be based on the terms of the 1982 agreement which expired in April last year, will provide Bangladesh with 35,000 cusecs of water during the driest months of April and May. This will once again leave the ports of Calcutta and Haldia with less than 40,000 cusecs of water to flush out the silt coming in from the Bay of Bengal.

Initially, however, the irrigation ministers will meet shortly to chalk out the terms of reference of a joint study of the available river water resources. They will also identify alternatives for the sharing of water resources to their mutual benefit including a long-term scheme for augmenting the flow of the Ganga at Farakka. Thereafter the joint study will commence and continue for 12 months. A review will be conducted six months after its commencement and upon completion of the study a decision will be taken on the scheme of augmentation of flow of the Ganga and the long-term sharing of river waters. The new agreement will undoubtedly go a long way in improving bilateral ties between India and Bangladesh as water sharing has been a constant irritant in their relations.

RBI REPORT

CAUTIONS AND RECOMMENDATIONS

The Sukhamoy Chakravarty committee which was set up in December 1982 by the Reserve Bank of India (RBI), to review the working of the monetary system, submitted its report in April 1985. The report has now been published by the RBI.

In its report the committee points out the need to keep deficit financing, measured in terms of recourse to credit from RBI, within safe limits because the increased recourse to deficit financing is a disconcerting development. It is also of the opinion that there is an urgent need to introduce some element of price competition among banks. Therefore banks should be free to choose their maturity pattern of deposits except for deposits of maturities of five years and above. The committee also feels that operations of the monetary system should be consistent with priorities laid down in successive five-year plans, in order to make the process of mobilisation of savings and utilisation of these resources 'socially purposive'. It also emphasises the need to finance plans through a non-inflationary manner by tapping the savings of the public in greater measure apart from realising higher savings from the public sector enterprises and improving efficiency in revenue gathering and expenditure functions.

The report categorically states that pursuit of price stability in the broadest sense should be the dominant objective of the monetary authorities. It also envisages a strong supportive role for interest rate policy in monetary regulation based on monetary targeting.

The committee feels that stricter discipline in the use of credit needs to be imposed and has recommended a steady reduction in the cash credit in bank lending and greater resort to financing of working capital through loans and bills.

Among the main recommendations of the Sukhamoy Chakravarty committee is the restructuring of interest rates as the committee feels that interest rate policy should have an important role to promote the

effective use of credit in the short-term monetary management; financing the plan through non-inflationary means and modification of the credit appraisal system.

TAMIL NADU

INTENSIFIED INFIGHTING

Politics in Tamil Nadu took an ugly turn following a feud between the regional All India Anna Dravida Munnetra Kazhagam's (AIADMK) Propaganda Secretary, Jayalalitha, and the state Agriculture Minister, K. Kalimuthu. The factionalism in the M.G. Ramachandran-led party had been evident ever since the reinstatement of Jayalalitha to the post from which she had been ousted earlier this year when the ailing CM was in the US for treatment.

But it soon became a full-scale war between the rival groups — one headed by Kalimuthu and Veerapan, a hardliner in the MGR ministry, and the other by Jayalalitha when she allegedly charged Kalimuthu for involvement in a bank fraud case. Incensed, Kalimuthu lashed out demanding her immediate dismissal. But Jayalalitha's benefactor MGR had other plans for her. Apparently he had been contemplating a Cabinet reshuffle to induct her into ministerial ranks. And when Jayalalitha's opposers got wind of this the infighting intensified.

It was then that MGR, in a desperate bid to resolve the crisis that threatened the stability and unity of the AIADMK, resorted to histrionics. He offered to step down in favour of a new leader and gave assurance of his full support to his replacement. But, so much is the adulation and loyalty which he commands from both the masses and ministers alike, that 24 Tamil Nadu ministers immediately resigned en masse to facilitate reconstitution of MGR's state Cabinet. It was only then that MGR revoked his earlier decision and decided to continue in office.

But as has been demonstrated time and again since his illness last year, it is MGR who is the cohesive force keeping his party together and in power. What would happen in the event of MGR's departure is anybody's guess.

CMs MEET

FOR UNIFORM TAX STRUCTURE

The CMs of five northern states, Punjab, Himachal Pradesh, Haryana, Rajasthan and J & K, participated in a meeting of the North Zone Council, on Oct 26, at Mandi. One of the decisions taken at the meeting was to introduce a uniform tax structure to ensure that no state suffered any revenue loss. The Punjab, Haryana and Rajasthan Governments decided to waive the recoveries amounting to Rs 3 crores from the Pong Dam project, at the instance of Himachal Pradesh. Haryana agreed to construct the Chandigarh-Brodiwala road, while the cost of a bridge across Sirsa river would be shared equally by Haryana and Himachal Pradesh. The CMs also decided to pool their efforts to contain terrorism. The Union Home Minister, S.B. Chavan, said that it was decided to refer the question of seeking foreign financial assistance for setting up hydel projects to the Union Finance Ministry and Planning Commission and also that a committee of chief secretaries had been appointed regarding the water supply scheme in Delhi. All the CMs had various suggestions to make. The Himachal Pradesh CM, Virbhadra Singh, urged for sanctions to raise resources to exploit the vast hydro-electric potential of the state. According to him, if funds from both India and abroad were made available, not only would the problem of power shortage in the region be eliminated, but the gestation period of bigger projects would be cut down through improved methods of construction. He pleaded for some kind of immediate assistance for the 14-crores 1,020 Mw Nathpa Jhakri project and five other projects for which global tenders had already been called.

INDIA-CHINA

TOWARDS BETTER TIES?

The sixth round of official level talks, on the controversial boundary issue, commenced in New Delhi. Against the backdrop of cordial talks between PM Rajiv Gandhi and the Chinese PM Zhao Ziyang, at New York. Headed by A.P. Venkateswaran, Secretary in the Ministry of External Affairs, on the Indian side and Liu Shuqing on the Chinese side, the talks essentially centred around substantive issues relating to the boundary issue on the basis of the principles agreed upon at the last session.

The two delegations were divided into various sub-groups. The boundary sub-groups were headed by R.S. Kalha, Joint Secretary in the

Ministry of External Affairs and Yang Zhengya, head of the Asia Department in the Chinese Foreign Ministry. China has shown a keen interest in improving bilateral ties with India. Already the two sides have arrived at a mutual agreement to take up the dispute sector by sector. This is a very important step forward in Sino-Indian relations. However, after two days of discussions, the Chinese delegation left for Goa. This break is likely to serve as a breather giving the delegates a chance to review their respective formulations and get fresh instructions.

The border dispute in the eastern sector is over small Chinese-occupied pockets in Arunachal and UP, coinciding with the international border. There is a fair chance that an amicable settlement can be made through diplomatic negotiations. However, in the western sector the Chinese occupy a substantial 14,500 square miles of land broadly called the Aksai Chin. The Chinese claim to a small portion of the sector along the road linking Sinkiang to Tibet is actually justified. Over the years, China has displayed a sustained obstinacy to vacate the area. However, with the PMs of the two countries taking an active and keen interest in the present negotiations, the results may not be the usual stalemate.

SEVENTH PLAN

RECEIVING THE GREEN SIGNAL

The National Development Council (NDC) has given its approval to the draft Seventh Five-Year Plan (1985-90). The council dealt with reports of three committees, one of them being the Rangarajan Committee headed by Dr C. Rangarajan, deputy governor, RBI. The council has accepted the Planning Commission view that the Rangarajan committee's recommendation for inflation accounting cannot be accepted.

The NDC has also authorised the Planning Commission to amend maintenance expenditure in select areas like power, roads and irrigation. The question of maintenance expenditure will, however, be viewed at a later stage.

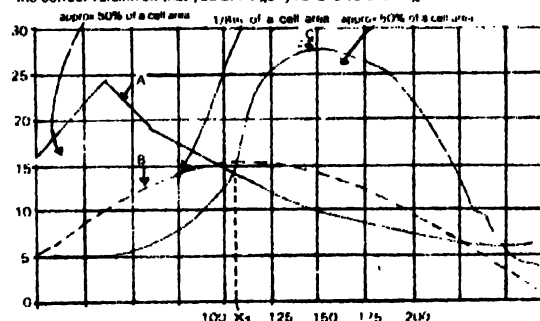
On the issue of centrally-sponsored schemes, the NDC has once again endorsed the Planning Commission's views and is planning to set up a committee of members of the NDC to look into the matter. The recommendation of this committee would be endorsed later before carrying out the necessary modifications in the Seventh-Plan scheme.

There has also been widespread demand for modification of the Gadgil formula for allocation of Central assistance to states, future implementation of anti-poverty programmes and removal of regional imbalances. Dr Manmohan Singh, deputy chairman, Planning Commission, pointed out that special emphasis in reducing regional imbalances and disparities would be given through accelerated agricultural growth. The Seventh Plan would mount a special programme for increasing production of rice and its productivity in eastern India. It is due to constraint of resources that priority has been given to rehabilitation of the railway system and its modernisation. This time there is a slight variation in the plan period. Though drawn for a period of five years, it keeps in perspective the next 15 years.

DATA INTERPRETATION TESTS

(Continued)

At the eleventh hour we spotted some discrepancies in graph no. IV of Data Interpretation Practice Tests (see page 50 of this issue). Here's the correct version so that you don't get your answers wrong.



The graph shown above represents the variation of probability (profit earned per unit) with sales volume for three different sales levels (100, 125, 150, 175, 200).

Probability here means the additional units of profit generated per unit increase in sales. For example, take the curve shown in Fig A. At sales 100 if sales increase to 101, the profit increment would be Rs 0.15 which will be equivalent to the shaded area.



PAKISTAN

CONSTITUTIONAL EYEWASH

President Zia-ul-Haq reached a compromise with the Independent Parliamentary Group in the National Assembly and got the contentious VIII Constitutional Amendment Bill passed unanimously by reducing his excessive powers. However, 48 members of the 237-member Assembly, mostly members of the Official Parliamentary Group, abstained from voting. The 11-party Opposition Movement for the Restoration of Democracy (MRD), rejected the compromise in the Assembly. It still stands by the 1973 Constitution on which the present Bill has whittled down. According to PPP leader Ghulam Mustafa Jatoi, what the country has now been offered in the 1985 Constitution is essentially presidential, instead of the parliamentary system embodied in the 1973 Constitution.

As in the 1973 Constitution, the National Assembly can elect the prime minister but that will be only after 1990, when the term of Gen Zia ends on the basis of his referendum. Gen Zia still retains the power to appoint the three Chiefs of Staff, the chairman of the Joint Chiefs of Staff Committee, the Chief Justice of the Supreme Court and the Election Commissioner. It has also been declared that martial law will go after Jan 1. Most of the details of the amended Constitution Bill have not yet been made public; it is already known that though the discretionary powers of the President have been reduced, he still retains enough power to manage state affairs.

In another part of the globe, the lime light was on Shahnawaz Bhutto who died of suspected poisoning in his Cannes apartment on Jul 18. Autopsy reports showed that Bhutto took eight to 12 hours to die, and laboratory tests showed that he had taken neither tranquilisers nor alcohol before his death. His wife, Rehana, was arrested for failure to provide assistance to a person in danger, a crime under French Law. She said that Bhutto was suffering from chronic depression and frequently took alcohol and tranquilisers. His mother Nusrat Bhutto, refuted all these charges. Meanwhile, his sister, Benazir Bhutto, who had been placed under house arrest since her arrival in Pakistan, was released in early November, with an order to leave the country immediately again.

THE PHILIPPINES

MEDDLERS FROM THE US

Senator Paul Laxalt, chairman of the Republican National Committee and a close associate of President Reagan recently visited the Philippines with a "blunt" message for President Ferdinand Marcos. Although Marcos said that the envoy had not been sent to intervene in the internal affairs of the Philippines, the *Metro Manila Times* headlines read "Another Meddler from the US" and most officials agreed with this view.

The US is apparently concerned about the future of the Marcos regime, and particularly about the security of strategic US facilities at Subic Bay and Clark Air Base. There is a growing guerrilla insurgency in the countryside which is a threat not only to the present government but also US military installations. The US feels that quick political reform would go far to strengthen the regime. Last year the CIA Director William Casey had gone to Manila with a message to this effect.

It is not known for certain as to what Laxalt talked about since both governments are tight-lipped about it. The State Department, however, did say that his mission was to press for political, military and economic reforms. On the political front, the US wants fair municipal and provincial elections to be held next May. They also want more professionalism in the armed forces to ensure victory against the guerrilla forces. The armed forces Chief of Staff, Gen Fabian Ver is now on leave due to his implication in the assassination of Opposition leader Benigno Aquino. His stand-in Lt Gen Fidel Ramos has promoted some modest reforms, and the Americans want him to continue in his office. The administration is totally against the reinstatement of Ver. In the field of economics, the US is worried about "Crony capitalism" in the Philippines. Recently, there have been allegations that Imelda Marcos and some of the President's political allies have stashed away millions of dollars in the US in real-estate investments. The US is also opposed to political monopolies which dominate the large industries of the Philippines. It feels that financial integrity is required before the people can have faith in the govern-

ment. The Americans still feel that Marcos can save the situation, but only if he brings about reform soon.

Although Laxalt said that he was satisfied with the talks, the question remains whether Marcos would implement any of the American dictates.

EAST-WEST

PREPARING FOR THE SUMMIT

Preparations for the Reagan-Gorbachov summit to be held on Nov 19, are in full swing, with the two sides making offers and the US Secretary of State, George Shultz, visiting the Soviet Union for a pre-summit talk with Gorbachov.

The Soviet Union first made a proposal suggesting an across-the-board 50% cut which would also include US intermediate range missiles, on the grounds that such missiles installed by the US on West European soil are strategic missiles as they are aimed at Soviet territory. While rejecting this interpretation, the US presented its own arms control proposals somewhat later. The US called for a limit of 3,000 warheads on intercontinental ballistic missiles on each side. The US proposal did not include the intermediate range missiles.

As a further step towards an effective arms control, the Soviet Union also suggested that both sides announce a freeze on the development of intermediate range missiles from Dec 1. They suggested that once the freeze is announced there should be a graduated scheme of reduction of the intermediate range missiles on both sides. The Russians feel that within 18 months of the freeze they would reduce the number of warheads mounted on their multiple warhead intermediate range missiles to a number equal to the warheads mounted on similar US, British and French missiles in Western Europe. The US is said to be examining this proposal.

In another important development, the Soviet Union presented to the US a draft agreement which Gorbachov would like to discuss with Reagan during the summit and which would be signed in the form of a communique emerging from the meeting. The text of the possible communique spelling out an agreement covering in principle all nuclear arms control issues, is being examined by US. There is hope all over the world that something positive will develop from the talks between the big two.

SOUTH AFRICA

CONTROVERSIAL EXECUTION

Benjamin Moloise, a poet and supporter of the out-lawed African National Congress (ANC) was convicted for the 1982 murder of Phillipus Selepe, a black policeman and hung in Pretoria in mid-October. His death made him another political martyr and riots broke out in Johannesburg, Cape Town and other parts of South Africa. The international community which had requested the Pretoria regime not to give him the death sentence in an effort to ease tensions, also reacted strongly.

It was never clearly established as to whether Moloise was actually responsible for Selepe's death. He had been shot eight times with an AK-47 rifle and 25 spent cartridges were found near his body. Initially Moloise said that he had murdered Selepe for testifying against three ANC members charged with treason. Later Moloise recanted his confession but he was found guilty. The ANC leaders, on the other hand, stated that Moloise was innocent and Selepe had been killed by a firing squad of ANC gunmen. Moloise again changed his story first saying that he had been forced by the ANC to commit the murder and then stating that he had planned it but not been a party to it.

Whoever may have been guilty, the execution exacerbated the already volatile situation. For the first time, the police acknowledged that they had come under sustained armed attack, but in South Africa, the gunfire is returned bullet for bullet and peace still seems far-off.

Meanwhile, in neighbouring Zimbabwe, PM Robert Mugabe met his political opponent Joshua Nkomo on Oct 2, in what were called "unity talks". Mugabe wants Nkomo to merge his ZAPU party with the PM's dominant ZANU (PF) party and it appears that he may soon succeed in this aim. Mugabe has been using strong arm methods against the ZAPU since the July elections when it won all the 15 seats in Matabeleland, where the Ndebele tribe, to which Nkomo belongs, is in

a majority. Nkomo's passport was confiscated, he was briefly held for questioning and ordered not to leave the country while the "investigations" were going on. Meetings between Nkomo and President Canaan Banana failed to yield results, and Nkomo finally agreed to meet Mugabe without any preconditions. If the parties merge, Mugabe could well be on the way to establishing his declared goal of a one-party state, since his party would control 79 of the 80 parliamentary seats assigned to blacks. Whites will continue to hold 20 of the seats till 1987 unless all 100 members agreed to a change.

CHINA

HOSTILE HOST

Visits to China were undertaken by two important personalities in October—George Bush, the American Vice-President and Shintaro Abe, the Japanese Foreign Minister. In both cases, China voiced grievances against the countries the dignitaries represented. The Chinese asked the US to convey a proposal to Taiwan to the effect that if it should tilt towards independence, China would be bound to "do something". Bush, however, clearly stated that the US was in no position to act as a catalyst to solve the problem between Peking and Taipei. The Chinese are apparently frustrated at the American failure to make more than token cuts in arms sales to Taiwan. This has been further aggravated by the American Congress's attitude to the Sino-US textile and nuclear agreements. Protectionist bills before the Congress could reduce Chinese textile exports to the US by about 500m yen. John Glenn also tabled a Bill recently which would block the implementation of the recently signed nuclear agreement between China and the US, unless the President certifies that it contains no loopholes leading to proliferation. While Bush said that the President would veto any textile bill which affects the Sino-US textile trade, the Reagan Administration has been explaining to the Congress that neither American law nor the Non-Proliferation Treaty (NPT) requires nuclear powers to accept safeguards. China is also piqued by the Reagan Administration's stand on China's birth control policy. In September, the Administration formally stated that China's population policy involves "coerced abortion and involuntary sterilisation".

Meanwhile, China blamed Japan for an adverse balance of payments in its trade with Japan. Chinese leader Deng Xiaoping more or less told Shintaro Abe that anti-Japanese sentiments are growing in China as a result of Japanese policies. The problem is partly historical, because China has never forgotten that it lost 3.2m of its soldiers during its war with Japan in World War II. The 40th anniversary of the Japanese surrender has rekindled anti-Japanese feelings and recently students in Peking, Xian and Wuban held anti-Japanese feelings and recently students in Peking, Xian and Wuban held anti-Japanese protest demonstrations. The immediate cause of the problem, however, is trade. China's trade deficit this year is nearly \$4b, up from last year's \$1.2b, which in itself was a record. China has also accused Japan of exporting sub-standard goods and of not importing enough from Japan. Although Abe put a brave face in front of these complaints and the air may have cleared for the time being, opponents of the Deng regime could use anti-Japanese sentiments to launch an attack on China's open-door policy.

POLAND

JARUZELSKI'S GAMBLE

The state-run Press reported that 78.8% of the electorate had voted in Poland's first parliamentary elections since martial law, while the Solidarity, which had been clandestinely monitoring the polls said that only 66% of Poland's 26m voters had cast their ballots. PM Wojciech Jaruzelski was evidently keen on a large turnout because the outcome was never in doubt. He wanted to prove to the East as well as the West that after almost four years of martial law his government was still popular and had overcome its divisions. To ensure a large turnout he held out a vague promise that he may release 280 political prisoners. At the same time he also held out the threat of a crackdown and several days before the elections a number of union activists were rounded up.

The Solidarity called for a boycott of the elections and on election day about 3,000 Solidarity supporters demonstrated in Gdansk holding up banners with the letters RSA (Movement for an Alternative Society). In the steel-mill city of Nowa Huta, hundreds of youth clashed with plainclothes police. The Solidarity also claimed that the government had used intimidation to make the Poles go to vote. Despite the government's carrot-and-stick approach, however, the voter turnout was lower than the almost universal turnout for the last legislative elections held five

years back.

The outcome of the elections was as expected. All the candidates for the Sejm, the Polish Parliament, had the approval of the Communist Party-dominated umbrella organisation, the Patriotic Movement for National Rebirth (PRON). Fifty candidates on the so-called National List, had no opposition at all. Poland's mood, however, can be judged from the performance of the candidates. Jaruzelski was placed 44th on the unopposed list of 50.

FRANCE

DEFIANT EXPLOSIONS

France exploded two nuclear devices at its Mururoa Atoll test site in the South Pacific, despite strong protests by the Greenpeace environmental organisation. A motley flotilla of ships of the Greenpeace movement, whose main aims are to protect the environment, save the world's whales and ban nuclear weapons demonstrated near Mururoa earlier, but were asked by the French Navy and Marines to stay at least 12 nautical miles off the island. One of its yachts, Vega, was however, seized off the atoll just a few hours before the nuclear test on Oct 24. Earlier, its flagship *Rainbow Warrior* had been sunk by French secret agents, who are now facing trial in New Zealand.

In another part of South Pacific, the first stage of the French Government's plan for New Caledonia's independence was completed when local elections were held on Sep 29. The pro-independence Kanak Socialist National Liberation Front took control of three regions in the territory, the North, the Centre and the Islands. The fourth region, Greater Noumea remained a majority enclave for the Rassemblement Pour La Caledonie dans la Republique and the Front National, both of which want to remain a territory of France. The anti-independence faction, however, had a 12-seat majority in the new 46-seat territorial congress which was also elected.

Early in October, President Mitterrand was very much in the limelight because of Soviet leader, Mikhail Gorbachov's visit to France. This being the first visit of Gorbachov to the West since he became the General Secretary of the Soviet Communist Party, it was freighted with many expectations most of which remained unfulfilled. However, although no major development in Sino-French relations came out of it, it showed Gorbachov to be an impressive leader, who pursues traditional Soviet goals in a modern—partly Western—manner.

ACHILLE LAURO

TERROR TACTICS

The failed sea-jacking of the Italian ship *Achille Lauro*, the murder of one of the hostages, American citizen Leon Klinghoffer, a stroke victim confined to a wheelchair, and the subsequent interception in flight of the Egypt airplane carrying the hijackers and two representatives of the Palestine Liberation Front (PLF) by American F-14 Tomcat fighters have led to a geopolitical turbulence in different parts of the world. Although claimed as a victory in domestic circles and silently applauded by Western observers (including an understanding nod from Moscow), the interception of the Egyptian airliner instigated university students in Cairo to hold anti-American demonstrations and burn American flags. President Mubarak also voiced his own sense of pain and humiliation at the incident and suddenly relations between Egypt and the US plummeted to a new low.

In Italy, five-party coalition government of Bettino Craxi, which was only one month short of becoming Italy's longest lived government since 1945, collapsed as the Republican Party leader, Giovanni Spadolini, withdrew his support from the coalition. The PLF men aboard the Egyptian plane, including a close associate of Yasser Arafat, Abu Abbas, were allowed to leave Italy on a Yugoslav airliner, and Spadolini was angry at not being consulted about the decision to release them.

Meanwhile, the US, which had been pleased with Italy for having allowed the use of its airport in Sicily to land the Egyptian airplane was upset at the release of the PLF men because evidence provided by the Israelis appeared to prove that Abbas had been actively planning the hijacking. The US is also displeased with Italy, because the latter does not wish to extradite the hijackers of the Italian ship. Further Italian law does not allow the extradition or alleged capital offences to a country which retains the death penalty. The Italians have been stung by the virulence of the American reaction and the Foreign Minister Giulio Andreotti has admitted that the government made a mistake in allowing the aircraft to land at its air base, which has also led to criticism from the communists, that the Italians are being manoeuvred by the Americans. Italy also has close ties with Egypt and reasonably good relations with

the PLO and there is consternation in government circles that these relations may be affected.

The Middle East peace process has also suffered as a result of the affair. Israeli PM Shimon Peres visited Washington recently and drove home the message that since Arafat's PLO was associated with recent terrorist acts, the peace initiative advanced by Jordan's King Hussein and Yasser Arafat should not be considered seriously. The Americans, however, feel that all this is a "temporary dislocation" and no permanent damage had been done either to America's relations with Egypt or to the broader Middle East peace process.

CENTRAL AMERICA

CHAOTIC DEVELOPMENTS

Six days before he was scheduled to address the UN General Assembly, President Daniel Ortega Saavedra of Nicaragua clamped down on civil liberties in the country. His decrees included a 12-month suspension of rights guaranteed under Nicaraguan law to free assembly, internal travel and freedom from arbitrary arrest or searches. Existing state of emergency restrictions like censorship of the Press, was reaffirmed and the practice of opening private mail was legalised. Two days later, five were accused of planning a series of bombings in Managua under the orders of the contra group Nicaraguan Democratic Force (FDN), were arrested. The FDN however, denied any connection with the group. Ortega said that he was adopting such severe measures because an "extraordinary situation" had been created by the "brutal aggression" from the US and its internal allies which included some political parties and religious institutions.

Its main de facto enemy, however, continues to be the Contras who operate from Honduras and are supported by the US. The Honduran government has long denied the existence of Contras on their soil. However, recently they were caught red-handed when a DC-6 reportedly carrying 14 tons of medical supplies and clothes (the first instalment of \$27m in humanitarian assistance authorised by the US Congress for the Contras in July), as well as a team of NBC cameramen landed at Tegucigalpa. The Hondurans, who were waiting for the shipment, embarrassedly said that they were confiscating the cargo, but nobody was hoodwinked.

Meanwhile, in El Salvador, President Jose Napoleon Duarte was stuck in the middle of a cross-fire. The leftist guerrillas raided an army training camp at La Union, killing 42 and wounding over 60 soldiers. On the other hand, the President has been negotiating with a guerrilla group called the Pedro Pablo Castillo Front because his daughter, Ines Guadalupe Duarte Duran was kidnapped a few months ago and he wants her released. The kidnappers have demanded the release of 34 rebels imprisoned by the government of which the government has been able to account for only 25. Duarte released three prisoners as a goodwill gesture, but has sought the release of Ines and 23 town mayors kidnapped by the guerrillas in the last few months, in return. The guerrillas refuse to release the mayors and the military leaders in El Salvador are unhappy with the President about the negotiations.

In Panama, President Nicolas Ardito Barletta, who came to office last October, resigned. This was a serious blow to the country's first experience in democratic rule in 16 years, even though he was succeeded by his civilian Vice President, Eric Arturo Delvalle. A number of people believe that Barletta's fall was linked with his pledge to investigate charges that the army had killed a prominent Opposition leader and military critic, Hugo Spadafora. Delvalle has yet to make his mark as a politician and meanwhile, Panama's military strongman, Antonio Noriega, is back in power.

UN

DISUNITY AMONG NATIONS

At its 40th anniversary celebrations, the UN was anything but united. The UN General Assembly failed to produce a declaration to mark the anniversary. There was no consensus on this matter because the statement would have included references to the establishment of a new international economic order and the right of Palestinians to self-determination. The US, while ready to accommodate on issue of the new international economic order was totally against the inclusion of the right of the Palestinians to self-determination.

While the Third World diplomats put the blame squarely on the US for this, the Americans said that a number of nations used the declaration as a "point-scoring exercise". However, on a number of issues, agreement was reached and these included the contribution of the UN to decolonisation, the indispensability of the UN as a forum for

negotiations, lack of universal respect for the UN Charter, the critical economic situation in Africa, the elimination of apartheid and respect for human rights.

As to the superpowers, they struck different notes at the meeting. While the Russians said that there was need to strengthen the world body and spoke of the growing world concern at the nuclear arms race between the US and the USSR, President Reagan still spoke in terms of cold war about ideological differences between the two countries. What was more apparent at the meet, however, were the differences between the North and the South between the developed and the developing nations.

The Security Council also met to mark the UN's 40th year, and it was hoped that the 15 member-states would produce some realistic suggestions about the future of the Council. But nothing came out of the meeting except a number of speeches along familiar lines.

USSR

GIVING RUSSIA A FACELIFT

The Soviet Communist Party's Central Committee met in the Kremlin on Oct 15, to hear Mikhail Gorbachov detail his 5- and 15-year economic plans, the new party platform and the rules to be adopted at the 27th Party Congress to be held next year. But Gorbachov did not comply and gave very few details. He spoke of two-fold increases in national income and industrial output and a rise in labour productivity of 130-150%. This implies an average 4.7% growth rate. According to official figures the Soviet economy has been growing at a rate of 3.5% in the 1980s, and, therefore, Gorbachov's proposed improvement is not too much.

He may, however, be keeping more radical plans tucked up his sleeve. He hinted that his plans may strengthen the resistance of bureaucrats who prefer a status quo. To get his way, he is making changes at the same time. Earlier in the month PM Nikolai Tikhonov resigned and was replaced by Nikolai Ryzhkov, who is known to be an industrial whiz-kid. Ryzhkov was relieved of his earlier job as secretary of the Central Committee so that he could concentrate on government work and also not wield too much power. Nikolai Baibakov, who had headed Gosplan since 1965, also "retired" on Oct 14, and was replaced by Nikolai Talyzin, who has been Russia's man at the Comecon since 1980. The Central Committee also promoted him to the politburo as a non-voting member, a position never given to Baibakov. Gorbachov has thus succeeded in bringing a new generation to power.

Meanwhile, on its border, the Finnish Communist Party defied Russia by expelling the "orthodox" pro-Russian minority faction. The Soviet Communist Party's Central Committee warned the Finns in September that this would have negative consequences for Finland's national interests and friendship and cooperation with Russia. Nevertheless, the Moscow-line district organisations were expelled and the Finnish Party has stated that unless individual members adhere to the mainstream organisation, their names would be struck off the rolls. Finland will join the ranks of other European countries with more than one communist party since the Moscow oriented men have decided to "control the struggle."

PORTUGAL

SOARES SHOCKED

The ruling Socialist Party led by PM Mario Soares, had expected to get 48% of the vote during the recent parliamentary elections. The surprise was that it received only 21% compared to the 57% it had drawn in the elections two years ago. The Social Democratic Party led by Ambal Cavaco Silva, which got 30% of the votes was the unexpected winner. Cavaco Silva is expected to form a minority government, possibly in alliance with the Christian Democrats (which also lost ground) early in November. Another surprise was the performance of the newly formed Democratic Renewal Party (PRD) formed by supporters of President Antonio Ramalho Eanes, who will probably take over leadership of the party when his current term ends. The PRD received 18% of the votes. Soares, who was not a candidate in the present elections, will run for President in January, but is likely to face stiff opposition if the PRD puts forward a candidate to oppose him.

The unforeseen results of the present elections were partly a response of the Portuguese public to the austerity programme of the Soares government which brought down the balance of payment deficit from \$3.2b in 1983 to \$500m in 1984, but also lowered the country's standard of living. Unemployment and inflation are both high and the new

(Continued on page 68)

CAREERS LAW

BY ILA SRIVASTAVA

Law studies aren't the exclusive forte of practising lawyers alone. Today a law graduate has a myriad avenues open for the pursuit of a challenging career. A peep into several such doors. Also the enterprising world of women lawyers.

Is legal practice the perfect and only opening for an aspiring law graduate? Well, so it was. But today's progressive world has opened up multifarious avenues for the law degree holders. Besides a law degree is nowadays considered an additional qualification for a number of jobs.

In India several law firms are emerging where more and more fresh graduates are being absorbed and trained to handle their cases in the courts. Joining a law firm has an advantage over private practice, in that one has the opportunity to work with senior and experienced lawyers. Even though in the initial years the firms do not pay the junior assistants more than Rs 300 to Rs 500, the young lawyers get an opportunity to learn the job without the pressures of private practice.

Judicial Services offer an interesting scope for enterprising law graduates. Like in the Civil Services the procedure for recruitment to the Judicial Services is a competitive exam followed by an interview. These exams are held by the State Public Service Commission on the basis of the number of vacancies announced by the respective High Courts every year. After qualifying these exams a candidate is appointed Munsif, Magistrate and then Judge. The only other way to become a judge is to be a practising lawyer for a specified number of years in a particular court.

An expanding new area open to lawyers is the corporate sector both private and public. With their growing dimensions and increased activity, it has become essential for the corporate sector to set up a separate legal department whose main job is to deal with any legal complications which may arise in the company.

Generally the companies give preference to law graduates with two to five years experience in a law court of any other

organisation, for appointment of law officers or legal executives. However, DCM recruits, what they call, law graduates trainees. These persons are fresh law graduates and they are given extensive training on how to handle the work of the legal department.

According to Ajay Verma, law officer, DCM, a legal executive who is employed full time by a company has a three fold function. Firstly, the advisory-cum-opinion giving function, which arises when the management wants to take a particular action and simultaneously avoid legal complications, which may consequently arise. For example before signing a contract the management consults the law department regarding the legality of the contract and its implications.

Secondly, when, despite best efforts, a dispute arises between the company and any other party, a law officer is expected to act as the link between the management and the lawyers outside. Thirdly, since there is a ban placed by the Bar Council of India on persons employed as law officers from being enrolled as practising lawyers, the law officers are expected to attend to the cases well enough to represent the company in the court. And since they are qualified in law they can understand the procedure and the relative merits and demerits of each hearing better, this helps in quickening the process of justice.

More and more law professionals today are opting for the financial security inherent in an office job because law is basically a very dicey game and the competition is fierce and extremely cut throat. The firm, whether it is a private company, a bank or a newspaper, pays a good salary to its law officers Rs 2000-Rs 5000 depending on their qualifications and experience. Consequently an increasing number of lawyers are lured by the relatively secure opportunities offered by the firms.

Government Jobs

The government sector is another expanding field of employment for law graduates. Qualified law personnel are required in every government office from the law ministry to the municipal corporation. A very good example of this is the Railways which has a vast law department. The Government of India also appoints law translators whose job consists of translating the legal documents into various languages. The appointments are made on the basis of vacancies and the pay scale is Rs 550-900, the gross

salary being Rs 1,600 per month.

For those with an intellectual bent of mind legal research and law teaching are the best avenues. To become a teacher the minimum qualification is L.L.M. The basic pay scale at the starting is Rs 700 to 1500 per month. However, a practising lawyer may teach part time, even with an L.L.B degree.

Law qualified staff is also preferred for para-legal work in the law courts. The jobs are highly lucrative and involve skill.

Legal Aid

In India 40% of the population lives below the poverty line, hence it becomes impossible for every person requiring justice to go to the courts, because the court fees and other expenses involved are tremendous. However, with the growing awareness among lawyers to carry justice to the grass roots legal aid administrators have been instituted. This is a professional area and persons interested in social work and social welfare may opt to work with these professional groups to help secure justice to the needy poor.

Besides these specific fields L.L.B. combined with other qualifications increases the job potential of a student and places him at a higher grade than students without a law degree. For example, if a law student qualifies the Civil Services exams there is every chance that he will be placed at a higher pay scale than others. Law is also helpful in competitive exams and in the conduct of business. Lawyers with science background are also recruited as forensic scientists. Also a degree in law plus social welfare gives an option to the student to be employed by the department of education and social welfare as field officer to assess and survey the working of grass root systems like panchayats.

A lecture by Prof. M.R.M. Menon, Director, Law Centre, Delhi University, "Education is citizen education." "The law school has studied law is more alien to the society in general and his own communities in particular. Menon says that if a lawyer has failed to make an impact it is due to his own disinterest and lack of encouragement and not because there are too many lawyers in the country. According to him the lawyer-person ratio in India is the lowest in the world, it being only one lawyer for over 3,500 persons. He claims that since India is a country governed by the rule of law the demand for law graduates is always on the increase. There is no question of the profession dying out.

WOMEN IN LAW

BY JYOTSANA KAPOOR



Anjana Gosain

Women lawyers are steadily on the increase. Most of the women lawyers interviewed find the legal profession lucrative and interesting. However "since there are no fixed hours in this profession, one cannot devote enough time to one's home and family." This is one reason why a number of women either prefer to marry lawyers and then assist their husbands or like to take up jobs in firms which means a fixed salary and fixed working hours. But there are women who are facing the challenge of private practice. "Private practice is any time better than a job" says Anjana Gosain, a young and upcoming lawyer. "It is more lucrative and gives a person lot of scope to grow intellectually as this is one profession where a person is always learning." However, Malini Sood, who works in a solicitor's firm likes her fixed working hours as it means more time at home with her husband and small child. "I may not be earning as much as a lawyer with a private practice, but then I did not have to go through the problems of setting up an independent practice."

Malini has a ready-made office and the company has a reputed clientele. The work involved is as challenging and satisfying as in a private practice. There is no intellectual stagnation as she has to deal with various cases and also attend court.

"The job gives me a sense of security and mental peace as I can take a day off if there is an emergency at home. There are my colleagues to look after my work and represent me in the court and the fear of losing a client is not on my mind. But if I have my own private practice, I will be forever worrying about my cases and my clients at the expense of my home and family". Malini explained.

"To be successful in this profession, one must have a thorough knowledge of the law, and a good command over one's language and also be an extrovert," says Kapila Hingorani, a well known Supreme Court lawyer. Married to a lawyer, Kapila

says that it helps to have your husband in the same profession. "I can discuss my cases with him and get his advice on various points whenever I want. He can also attend to my cases if I am not well and cannot attend the court. Financially also, both of us being in the same profession, has advantages. We can have the same office and also the same library," she says.

Success to Kapila does not mean only money, but a good reputation and standing in the profession. "Integrity and honesty are very important in this profession as one is always handling matters of trust. A woman lawyer to be successful, has to really be in love with the profession as it involves hard work and tension." It takes time to get the feel of the court present the cases briefly and to the point, she adds.

Rajinder Bali, a woman lawyer, has opted for job security. She is the Chief Manager (Head of the department) of all branches of Punjab & Sind Bank in India. Her husband is in a transferable job and that made private practice impossible for



Kapila Hingorani

her. "Law", she feels, "is a good profession for women, as it makes them more aware of their rights and duties. A large majority of women in India are ignorant about the laws which are meant for them and a woman client can feel more comfortable with a woman lawyer. That is why I feel that women lawyers should be allotted separate rooms in the courts. It is only then that women will get the confidence to approach the lawyers themselves."

Rajinder does not believe in women setting up private practice. "A woman's first duty is towards her children and her home. She is first a mother and a wife, then anything else. If she has a lawyer husband, she can assist him in his chamber work, but a woman lawyer I feel cannot do justice to both her home and her practice." Bharti Anand, the Additional Public Pro-



Rajinder Bali

secutor in the High Court of Delhi is a good example of a woman lawyer who is successfully handling both her career as well as her home. Married to a lawyer of repute, she not only assists her husband in his chamber work, but also argues her cases in the court on behalf of the State and still finds time enough to look after her home and children. "Work is not very heavy and gives me a little extra time, though my responsibilities are the same as those of any other lawyer. I have to come home and study the files and prepare the cases", she says.

Bharti who is on the panel of the Delhi Administration for criminal cases, says that she enjoys criminal cases more than civil ones. Being a woman she says, is no handicap. Clients are very respectful and go by the sincerity and dedication of a lawyer and do not discriminate on the basis of sex.

According to Chandramani Chopra a senior lawyer, in this profession women have to learn to fight against their own inhibition and to be aggressive and assertive. No one can afford to be sensitive in the court dealings. Women must also not feel shy about appearing in the court. Exposure helps a person a great deal.

Chandramani fights for the women's rights and says that it gives her a lot of satisfaction to fight for a particular cause. "Women who come to me are in a shattered



Chandramani Chopra

tered state of mind. I help them not only legally but also mentally and morally to become strong and fight for their rights." She is married to a lawyer and says that it has advantages and disadvantages. Sometimes while dealing with a case the man tries to assert his viewpoint as the correct one. It can put off a woman as every person's approach and style of working is different. ■

AN EXERCISE IN ENGLISH

BY N.P. SINGH

From comprehension to composition, from precis-writing to correct usage, from synonyms to antonyms, from letter-writing to spotting errors. The entire gamut of essentials that must be mastered before venturing to take the forthcoming Bank (PO) exams— all in a neatly arranged very special package. A package hopeful Bank POs can certainly bank upon.

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the questions. Answers are given at the end of these tests.

Read the passages carefully and answer the questions that follow :

A I firmly believe that this is the gut challenge for countries like India and China—that is, to motivate their people to leap over several phases of indulgent and wasteful living and so achieve a humane, sophisticated and civilised way of solving the problems of mounting numbers—simple, comfortable living styles. The scale of the challenge could be reduced, but only marginally in the near future considering that reductions in population proceed slowly even in highly disciplined societies.

The effort in this direction of re-designing lifestyles which open an honest perspective of humane existence would be tackling challenges at the frontiers of our social consciousness. In fact, we would be pioneering pathways for the world at large. If the problem of numbers overshadows our thinking in Asia, it will assume all manner of dangers for other lands in the future as they control their growing numbers. Some will become older conglomerations. Others, younger. And we will see imbalances in sex ratios. Every drastic move carries its aberrations.

There will be terrifying migrations carrying explosive ethnic tensions. After all, the standard enjoyed in lands taken over by migrants from Europe and only sparsely inhabited, will draw the poor of the world despite legislative blocks. The poor will push through and assert themselves. This is an on-going movement, and it will find its theoretician. After all, what would be the present fate of Europe, had some 150m stayed on and not moved to the Americas, to Australia, and to Africa?

From *The Illustrated Weekly Of India*

1. Countries like India and China can solve the problem of population

explosion

- (a) by creating new human settlements in de-populated areas
 - (b) by enforcing a new work ethics and culture in rural areas
 - (c) by envisaging an austere, spartan lifestyle for all the people
 - (d) by evolving a decent, dignified lifestyle for all the people
2. An alternate mode of living can be successfully achieved
- (a) if the society is made highly disciplined and cohesive
 - (b) if the people's thinking is innovative and daring
 - (c) if an appropriate intermediate technology is adopted
 - (d) if the leaders can articulate an honest future perspective
3. "If the problem of numbers overshadows our thinking in Asia, it will assume all manner of dangers for other lands in the future as they control their growing numbers." This means that
- (a) while Asia would solve her population problem other continents would fail to do so
 - (b) both Asia and Europe would face dangers of over-population and mass starvation
 - (c) there would be disturbing population trends everywhere in the world
4. What would be the population trend in the future?
- (a) There would be a gradual transfer of population from the countries of Asia to Europe
 - (b) The poor people of the world would be absorbed by the new world
 - (c) The restricted emigration of the poor people would be allowed by the rich countries
 - (d) The poor people would penetrate the barriers and establish themselves firmly
5. Europe escaped a virtual demographic disaster in the twentieth century
- (a) because its population growth was

neutralised by colonial expansion

- (b) because its booming industry could absorb its surplus rural population
 - (c) because its people emigrated in large numbers
 - (d) because its birth rate was drastically brought down
- B. A great deal of discussion continues as to the real extent of global environmental degradation and its implications. What few people challenge however, is that the renewable natural resources of developing countries are today subject to stresses of unprecedented magnitude. These pressures are brought about, in part, by increased population and the quest for an ever-expanding food supply. Because the health, nutrition, and general well-being of the poor majority are directly dependent on the integrity and productivity of their natural resources, the capability of governments to manage them effectively over the long term becomes of paramount importance.

Developing countries are becoming more aware of the ways in which present and future economic development must build upon a sound and sustainable natural resource base. Some are looking at our long tradition in environmental protection and are receptive to US assistance which recognises the uniqueness of the social and ecological systems in these tropical countries. Developing countries recognise the need to improve their capability to analyse issues and their own natural resource management. In February 1981, for example, AID funded a National Academy of Sciences panel to advise Nepal on their severe natural resource degradation problems. Some countries, such as Senegal, India, Indonesia and Thailand, are now including conservation concerns in their economic development planning process.

Because so many governments of developing nations have recognised the importance of these issues, the need today is not merely one of raising additional consciousness, but for carefully designed and sharply focussed activities aimed at the establishment of effective resource management regimes that are essential to the achievement of sustained development.

From *Horizons*

There has been a pronounced deterioration of habitat all over the globe because of

- (a) large-scale deforestation and desertification
- (b) optimum degree of industrialisation in the developing countries
- (c) unprecedented urbanisation and dislocation of self-contained rural communities
- (d) rigorous operation of the Malthusian principle

The poor people of the developing world can lead a happy and contented life if

- (a) there is an assured supply of food and medical care
- (b) economic development takes place within the ambit of conservation of natural resources
- (c) there is a North-South dialogue and aid flows freely to the developing world
- (d) industries based on agriculture are widely developed

3. Technical know-how developed in the USA

- (a) can be easily borrowed by the developing countries to solve the problem of environmental degradation
- (b) can be very effective in solving the problem of resource management in tropical countries
- (c) can be properly utilised on the basis of developing countries being able to launch an in-depth study of their specific problems
- (d) cannot be easily assimilated by the technocrats of the developing countries

4. Some of the developing countries of Asia and Africa have

- (a) laid a great stress on the conservation of natural resources in their educational endeavour
- (b) carefully dovetailed environmental conservation with the overall strategy of planned economic development
- (c) formulated very ambitious plans of protecting habitat in the region
- (d) sought the help of US experts in solving the problem of environmental degradation

mental degradation

b. How much environmental pollution has taken place in the developing and the developed world?

- (a) There has been a considerable pollution of environment all over the globe
- (b) There has been a marginal pollution of environment in the developed world and extensive damage in the developing world
- (c) There has been an extensive environmental degradation both in the developed and the developing world
- (d) The environmental pollution that has taken place all over the globe continues to be a matter of speculation and enquiry

c. These then are the major stages in the life cycle as described by Erikson. The significance of these stages for our traditional ways of looking at personality development and at emotional disturbances in adults is far reaching. By describing stages of personality development beyond those of childhood, Erikson has suggested that there are emotional crisis that are unique to each stage of life including middle age and maturity. Such a position frees the clinician to treat adult emotional problems as failures, in part at least, to solve genuinely adult personality crises and not as mere residuals to infantile frustrations and conflicts.

This view of personality growth, moreover, takes some of the onus for successful development of the parents and takes account of the role which the person himself and society play in the formation of an individual personality. Finally, extending the traditional role of psychoanalysis, Erikson has offered hope for all of us by demonstrating that each phase of growth has its strengths as well as its weaknesses, and that failures at one stage of development can be rectified by successes at later stages.

Perhaps Erikson's innovations in psychoanalytic theory are best exemplified in his psychohistorical writings in which he combines psychoanalytic insight with a true historical imagination. After the publication of *Childhood And Society* in 1950, Erikson undertook the application of his scheme of the human life cycle to the study of historical persons. He wrote a series of brilliant essays on men as varied as Maxim Gorky, George Bernard Shaw and Freud himself. These

studies were not narrow case histories but rather reflected Erikson's remarkable grasp of Europe's social and political history as well as of its literature. In each of these essays, the figures were shown as true historical persons whose lives reflected on and were reflected by the times in which they lived. These biographical sketches like Erikson's later full scale biographies, are a rare species in psychoanalytic personality portraiture because they make a contribution to history as well as to the theory of personality.

From *The American Review*

1. The identity crisis that disturbs the equilibrium of an adolescent is
 - (a) rooted in Oedipus complex
 - (b) derived from parental authoritarianism in the family
 - (c) the result largely of fears and apprehensions of childhood
 - (d) the outcome of conflicts and confusion specific to the period
2. "Finally, extending the traditional view of psychoanalysis, Erikson has offered hope for us all by demonstrating that each phase of growth has its strengths as well as its weaknesses, and that failures at one stage of development can be rectified by successes at later stages." It really implies that
 - (a) personality growth is a continuous, spiralling process from childhood to old age
 - (b) each phase of the life cycle is self-contained and the deficiency at a lower stage can be obliterated at a higher stage
 - (c) personality growth occurs in a dialectical manner
 - (d) each phase of life contributes something positive and something negative to personality formation
3. Erikson developed a new kind of biography in which
 - (a) brilliant portraits of historical persons were successfully projected
 - (b) unique historical figures were pictured as the product of the age
 - (c) three historical figures were depicted both as the creatures and as the creators of the age
 - (d) the historical figures were recreated as the products of the age and also as the pioneers of the new age.
4. How did Erikson verify and substantiate his hypothesis of personality development?
 - (a) He verified and established his hypothesis of personality development by a clinical study of cases
 - (b) He developed his theory of

- personality development through observation and rigorous analysis
- (c) He verified and established his hypothesis of personality development through a careful study of historical figures
- (d) He formulated his theory of personality development by extending Freudian psychoanalysis
5. Keeping in mind his substantial contribution to psychoanalysis, Erikson
- (a) could be safely regarded as a bold rebel against Freud
- (b) could be described as an innovative disciple of Freud
- (c) could be rightly treated as a daring dissenter
- (d) could be taken as a neo-Freudian who affirmed that Freud had nothing to say about man's relation to society and culture

USAGE

- II. Choose the most appropriate answer:
1. Could I rely ——— you to be discreet?
- (a) at (b) upon
- (c) in (d) over
2. We ——— tennis in the garden, when you telephoned.
- (a) had played
- (b) playing
- (c) were playing
- (d) are playing
3. The police ——— the extremist only today.
- (a) have arrested
- (b) has arrested
- (c) are arresting
- (d) are being arrested
4. If he had taken his doctor's advice, he ——— recovered soon.
- (a) would be
- (b) would have
- (c) would have been
- (d) should be
5. There are some birds in Siberia that ——— every year to the Ghana bird sanctuary.
- (a) migrated
- (b) have migrated
- (c) are migrating
- (d) migrate
6. But they lament and express their despair ——— the way Gandhi has been forgotten in his own land.
- (a) over (b) of
- (c) in (d) with
7. The government ——— on this issue.
- (a) is divided
- (b) are divided
- (c) is being divided
- (d) is getting divided
8. If she were here, she ——— her mother.
- (a) could help
- (b) may help
- (c) could have helped

- (d) would have helped
9. I have known her ——— the end of the World War II.
- (a) from (b) since
- (c) during (d) towards
10. Which sentence is properly punctuated?
- (a) No! I shall not go to the game this afternoon.
- (b) No; I shall not go to the game this afternoon.
- (c) No, I shall not go to the game this afternoon.
- (d) No! I shall not go to the game this afternoon!
11. The landlady ——— since the morning.
- (a) has gossiped
- (b) has been gossiping
- (c) gossiped
- (d) has gossiped
12. They have hatched ——— conspiracy to kill the leader.
- (a) a (b) the
- (c) an (d) —
13. We ——— to the seaside for a month every summer.
- (a) went (b) had gone
- (c) go (d) were going
14. It was very dull early this morning, but the sun ——— now.
- (a) shone (b) shines
- (c) was shining (d) is shining
15. We ——— all our money, so we shall have to walk home.
- (a) spend (b) have spent
- (c) spent (d) had spent
16. The plane ——— before I reached the airport.
- (a) took off
- (b) was taking off
- (c) had taken off
- (d) had been taken off
17. In the Middle Ages, people believed that the sun ——— round the earth.
- (a) had revolved
- (b) was revolved
- (c) revolved
- (d) is revolving
18. While I was bathing, she ——— to pop music.
- (a) listened
- (b) had listened
- (c) could listen
- (d) was listening
19. I was told that twenty planes ——— down the day before.
- (a) had shot
- (b) had been shot
- (c) shot
- (d) had been shooting
20. If you had worked regularly, you ——— success in the competition.
- (a) would get
- (b) could get
- (c) must get
- (d) would have got
21. They had been trying to contact us

- two days.
- (a) from (b) for
- (c) since (d) within
22. If you ——— earlier, you would have caught the train.
- (a) had come
- (b) came
- (c) were coming
- (d) had been coming
23. By the year 2000 A.D. the population of India ——— 1,000m.
- (a) will reach
- (b) shall reach
- (c) will have reached
- (d) should reach
24. Indians ——— politically conscious before they got freedom from the British.
- (a) became
- (b) becoming
- (c) had been becoming
- (d) had become
25. We ——— all hang together, or we shall all perish.
- (a) must (b) would
- (c) could (d) might
26. How ——— you speak to me like that?
- (a) should (b) might
- (c) dare (d) may
27. You ——— go to Dubai. Jobs are not available there now.
- (a) need not (b) might not
- (c) could not (d) will not
28. Would you mind ——— on the light?
- (a) to switch
- (b) switching
- (c) to switching
- (d) to turning on
29. ——— you possibly lend me a thousand rupees?
- (a) Could (b) Must
- (c) Should (d) Can
30. He was driven ——— desperation by poverty.
- (a) towards (b) toward
- (c) at (d) on

SPOTTING ERRORS

III Spot the errors, if any:

1. They make me to believe that there was no danger. No error.
- a b c d
- They have proved themselves to be worthy of promotion. No error.
- a b c d e
- Everyone thought it more foolish for you to climb the mountain alone. No error.
- a b c d e
- Would you have the government: a b

13. Our alliances were severely shaken
and leaders from London to Paris to
Moscow were asking whether the US
had lost its way, and whether we
could derive our ability to play a
positive role of leadership in international affairs. No error.

14. But as we set out on what we hope
will be a more promising period, we
should proceed forthrightly, honestly
stating both our purposes and misgivings, hiding neither our hope
nor fears. No error.

15. It's often said that the rivalry between
the US and the Soviet Union is close
to immutable, and that our job is end
it but merely to keep it under control. No error.

16. Some say that for 1945 there's been
only one way to end it, and that way
is too terrible to contemplate. No error.

17. But for many others, the inevitability
of competition is not caused simply
by the gruesome facts of the nuclear
age. No error.

18. Many in the West are looking for
signs off change in the Soviet Union's
thinking on international political issues. No error.

19. To the contrary, we have to take
competition as a fact and do the best
that we can. No error.

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ways; not only in the economy but also in the social sphere. No error.
e

27. These seem like hopeful words, but
a perhaps you will agree that those of
b us in the West, on the outside, have a
c hard time knowing how to interpret
d them. No error.
e

28. In the past, the appearance of change
a has been no more than a mask
b behind which systematic rigidities
c endure. No error.
d
e

29. Each new leader—however strongly
a he might favour change—have found
b that having risen by following the
c rules of the system, he becomes cap-
d tive to it. No error.
e

30. If such a process is beginning, it will
a difficult to discern, we may not be
b able to make a contribution to it, and
c we cannot predict its
d outcome. No error.
e

SYNONYMS

IV Choose the word nearest in meaning to the given word:

1. BARRICADE
(a) bridge (b) barrier
(c) tornado (d) varnish
2. ENCUMBRANCE
(a) disturbance (b) distraction
(c) burden (d) hindrance
3. INQUISITIVE
(a) open-minded
(b) excited
(c) anxious to please
(d) eager to know
4. PRETENSION
(a) pride (b) confidence
(c) presumption (d) claim
5. SOMNAMBULISM
(a) sleep-walking
(b) sleeping-sickness
(c) sea-sickness
(d) sleepiness
6. IMPETUOUS
(a) energetic
(b) excited

- (c) mobile
(d) hasty in action
7. MANNISH
(a) brave as a man
(b) male
(c) man-like woman
(d) confident
8. NUTRITION
(a) good food
(b) good health
(c) assimilation of food
(d) nourishment
9. OMNIVOROUS
(a) present everywhere
(b) eating all kinds of food
(c) non-vegetarian
(d) very powerful
10. OVER-WROUGHT
(a) tired by too much excitement
(b) extremely angry
(c) excess of bitterness
(d) full of nervousness
11. PANORAMA
(a) a beautiful scene
(b) a wide view of something
(c) lush greenery
(d) an airfield
12. ANIMOSITY
(a) animal-like (b) brutality
(c) bravery (d) enmity
13. APPREHENSION
(a) anguish (b) understanding
(c) self-control (d) balance
14. ASTROPHYSICS
(a) science of matter
(b) science of rocks
(c) science of stars
(d) science of weather prediction
15. ATROPHY
(a) wasting away
(b) grow slowly
(c) reduce in number
(d) stagnate
16. AUDITION
(a) pertaining to sound
(b) good voice
(c) voice test
(d) voice culture
17. AUTHENTICITY
(a) genuineness
(b) trust
(c) faith
(d) self-reliance
18. AVALANCHE
(a) storm
(b) great mass of snow and ice
(c) flood
(d) tornado
19. AVANT-GARDE
(a) literary dictator
(b) a drama critic
(c) an art critic
(d) radical leaders of a literary movement.
20. BABOON
(a) a dog
(b) a monkey with a dog-like face
(c) a chimpanzee

- (d) a gorilla
21. BALLERINA
(a) a woman ballet dancer
(b) a pop singer
(c) a classical dancer
(d) a popular artist
22. BALLYHOO
(a) great noise
(b) approval
(c) noisy publicity
(d) admiration
23. BAMBOOZLE
(a) frighten (b) cheat
(c) anger (d) confuse
24. BARBARITY
(a) savage cruelty
(b) primitive religion
(c) ancient culture
(d) mother cult
25. BAWDY
(a) arrogant (b) proud
(c) vulgar (d) crude
26. BEARABLE
(a) light
(b) easy to carry
(c) small
(d) that can be endured
27. BEFOGGED
(a) muddle-headed
(b) affected by fog
(c) dim
(d) dull
28. BELABOUR
(a) work hard
(b) give hard blows
(c) birth pang
(d) work feverishly
29. BENEVOLENT
(a) too soft
(b) mild
(c) considerate
(d) kind and helpful
30. MISANTHROPE
(a) miser
(b) person who hates mankind
(c) spend thrift
(d) vagabond

ANTONYMS

V Select the word which is nearly the opposite in meaning to the given word:

1. DIABOLIC
(a) simple (b) kind
(c) generous (d) patient
2. GROTESQUE
(a) congruous (b) good
(c) decent (d) acceptable
3. POMPOUS
(a) mild (b) feeble
(c) humble (d) normal
4. HAMSTRING
(a) enlarge (b) awaken
(c) stimulate (d) strengthen
5. IMPULSIVE
(a) cunning
(b) cautious
(c) clever

- (d) considerate
6. AFFECTATION
(a) natural
(b) good
(c) full of love
(d) likable
7. ALLEY
(a) wide road
(b) crossing
(c) intersection
(d) path
8. AMORAL
(a) immoral (b) evil
(c) moral (d) wicked
9. ANALOGOUS
(a) uniform
(b) regular
(c) not familiar
(d) disputable
10. DISSENT
(a) agreement
(b) controversy
(c) dispute
(d) disunity
11. ARTICULATE
(a) dumb
(b) mute
(c) incapable of effective speech
(d) silent
12. BACCHANAL
(a) sober (b) grave
(c) cautious (d) cunning
13. BENIGN
(a) stern (b) strict
(c) harsh (d) malignant
14. CALCULATING
(a) simpleton (b) idiot
(c) artful (d) artless
15. CAMOUFLAGE
(a) reveal (b) project
(c) convey (d) express
16. CASUAL
(a) regular (b) systematic
(c) formal (d) harsh
17. CATHOLIC
(a) narrow-minded (b) rigid
(c) one-sided (d) harsh
18. CHICKEN-HEARTED
(a) rash
(b) full of courage
(c) brazen
(d) venturesome
19. CLANDESTINE
(a) half-closed
(b) open
(c) straightforward
(d) firm
20. COMMODIOUS
(a) small (b) limited
(c) cramped (d) cluttered
21. COMPACT
(a) broken (b) diffuse
(c) enlarged (d) expansive
22. CONSOLIDATE
(a) divide (b) weaken
(c) isolate (d) identify
23. CRABBED

- (a) composed (b) cold
(c) chilly (d) clever
24. DAINTY
(a) wild (b) rash
(c) crude (d) vulgar
25. DECEIT
(a) truthfulness (b) fact
(c) reality (d) trust
26. DEGENERATE
(a) create (b) reproduce
(c) restore (d) progress
27. DEROGATORY
(a) praiseworthy
(b) laudatory
(c) significant
(d) rare
28. ECONOMISE
(a) over-spend
(b) make proper use
(c) get a good return
(d) balance income and expenditure
29. EGALITARIAN
(a) aristocratic
(b) elitist
(c) bourgeois
(d) patrician
30. EGOCENTRIC
(a) altruistic
(b) generous
(c) lavish
(d) spend thrift

PRECIS

VI Make a precis of the following passages:

(a) Lately, the lending policies of the International Monetary Fund (IMF) have come in for a lot of criticism from both the Third World countries and the affluent nations which call the shots. The former have questioned the terms and conditions laid down by the IMF as also its rigid policy prescriptions which do not take into account the particular socio-economic conditions prevailing in the assisted country. And sometimes, the adjustment programmes prescribed by the world lending body have created tensions in the country concerned, as a few years ago in Egypt. The affluent nations, of course, have their own grouse, as they are worried about the debtor nation's inability to repay not only the principal amount but also the mounting interest on it. And in this sort of the Latin American countries find themselves in a hopeless situation, what with their total debt running into hundreds of billions of dollars. Fortunately, India, thanks to its prudent debt management, has scrupulously avoided falling into a debt trap. In the year 1983-84, the debt service repayment to IMF aggregated Rs 1,868 crores which was 11% of India's projected export earnings. In 1985-86, it will aggregate Rs 985.42 crores. What is more, the IMF is fully satisfied with India's performance.

(b) Looking back over the past hundred years or more, it is clear that *Second Wave Society*, classical industrial society, required a certain kind of workforce. For the system to work, it needed workers who would show up at the factory on time, who would take orders, who would do repetitive work, and so on. Unconsciously, a school system took form that, on the surface, varied from one industrial country to the next, yet which, under the surface had certain basic similarities. Thus there is, in every school system, an overt curriculum and a covert curriculum. At the overt level, there are differences from place to place. We teach American history. But underneath, all of these systems teach three basic courses. The first is a course in punctuality. Kids must show up on time or be punished. The second is a course in obedience. Even in schools that pride themselves on teaching kids to think and ask questions the smartest kids quickly discover what questions not to ask. The third is a course in rote work. The school has the task of breaking the child into a life of routine and repetitive toil. In this sense, the schools of the industrial age were a highly efficient anticipation of what life would hold later on. They offered an advanced simulation of adult life. And that was, perhaps, a sensible thing for schools to do. The problem is that the system still teaches the same covert curriculum, even though the world the child will enter no longer requires the same virtues. That's not the kind of workforce that we're going to need in the future. Therefore, I think the time has come for fundamental changes in the nature of this kind of education.

(c) The destruction of forests has a major impact on the productivity of our crop lands. This happens in two ways. Soil erosion increases manifold and the soil literally gets washed away, leading to an accentuated cycle of floods and droughts. But equally important is the impact of the shortage of firewood on the productivity of crop lands. When firewood becomes scarce, people begin to burn cowdung and crop wastes. In many places cowdung and crop wastes are now the major sources of cooking energy. Thus, slowly every part of the plant gets used and nothing goes back to the soil. Over a period of time, this nutrient drain affects crop productivity. Add to this the technology of the Green Revolution: the technology of growing high yielding varieties on a limited diet of chemical fertilisers like nitrogen, phosphate and potash. The total biomass production goes up and so does the drain of the nutrients from the soil. Plants need some 25-odd elements to grow, not just nitrogen, phosphorous and potassium. They keep taking these nutrients from the

soil and the more intensive the agriculture, without any manure and crop wastes going back to the soil, the faster is the nutrient drain.

(d) Sociologist Erich Fromm, in his study on human destructiveness, has commented at length on the effects of rootlessness and the loss of a proper sense of self that is part of the existential problem that afflicts a person living in the world today. Apart from the basic drives of hunger and sex, and the instinct for survival, man also appears to need stimuli that will remind

him of his reason for remaining alive. "He needs," says Fromm, "an object of devotion for a number of reasons. The object integrates his energies in one direction. It elevates him beyond his isolated existence, with all his doubts and insecurity and gives meaning to life. In being devoted to a goal beyond his isolated ego, he transcends himself and leaves the prison of absolute egocentricity." Conversely, Fromm also goes on to demonstrate that when an individual drops out of society for whatever the reason, "the sense of being condemned to ineffectiveness—complete

vital impotence (of which sexual impotence is only a small part)—is one of the most painful and almost intolerable experiences, and man will do almost anything to overcome it, from drug and work addiction to cruelty and murder."

COMPOSITION

VII Write an essay on any one of the following:

- New Education Policy
- Terrorism
- India in 2000 A.D.

ANSWERS

- I A 1. (d) The choice is between c and d.
 2. (b) The key phrase is "innovative and daring"
 3. (c) It is a global problem
 4. (d) The poor people would swarm everywhere
 5. (c) It was emigration that saved Europe
- B 1. (d) Malthus said that population growth would exceed food production.
 2. (b) **Ambit** means extent or limit.
 3. (c) Developing countries have to study their problems carefully.
 4. (b) Dovetail means to fit properly
 5. (d) There is a discussion going on about the extent of environmental degradation.
- C. 1. (d)
 2. (d) Obliterated means to get defects corrected.
 3. (c) Historical figures were both creators and creatures of the age. They were created by the age and to some extent they created the age.
 4. (c) Erikson tried to check his theory of personality development by studying carefully historical figures.
 5. (b) The key phrase is an innovative disciple which means a follower of the master of psychoanalysis who extended the discipline by introducing new concepts.
- II 1. (b)
 2. (c)
 3. (a) The word police always has a plural verb.
 4. (b)
 5. (d) Simple present tense is mostly used to convey a habitual action.
 6. (a)
 7. (b) Government takes a plural verb because we are thinking of its members who have different views.
 8. (a)
 9. (b) Since indicates point of time.
 10. (c)
 11. (b) Gossiping shows continuous action.
 12. (a) Countables are preceded by a.
 13. (c) A habitual action
 14. (d) Continuous activity
 15. (b) Present perfect tense
 16. (c) Past perfect tense
 17. (c) Concord. Past tense follows past tense.
 18. (d) Two activities in continuation.
 19. (b) Past perfect tense.
 20. (d) Third type of conditional (had + v3... would have + v3).
 21. (b) For indicates period of time.
 22. (a) Conditional type 3.

23. (c) Future perfect tense.
 24. (d) Past perfect tense.
 25. (a) Must conveys a sense of obligation.
 26. (c) Dare conveys a kind of threat.
 27. (a) Need not conveys advice.
 28. (b) Would you mind is followed by -ing form of the verb.
 29. (a) Could is used to indicate a polite request.
 30. (c) Driven takes to as a preposition.
- III 1. (b) 2. (e) 3. (b) 4. (e) 5. (b) 6. (e)
 7. (d) 8. (d) 9. (d) 10. (e) 11. (b) 12. (b)
 13. (d) 14. (d) 15. (d) 16. (a) 17. (e) 18. (c)
 19. (a) 20. (c) 21. (b) 22. (d) 23. (c) 24. (a)
 25. (c) 26. (d) 27. (d) 28. (e) 29. (c) 30. (d)
- IV 1. (b) 2. (c) 3. (d) 4. (d) 5. (a) 6. (d)
 7. (c) 8. (d) 9. (b) 10. (a) 11. (b) 12. (d)
 13. (b) 14. (c) 15. (a) 16. (c) 17. (a) 18. (b)
 19. (d) 20. (b) 21. (a) 22. (c) 23. (b) 24. (a)
 25. (c) 26. (d) 27. (a) 28. (b) 29. (d) 30. (b)
- V 1. (b) The correct answer is **kind** because **diabolic** means **cruel**.
 2. (a) Since **grotesque** means something strange and fantastic, the correct answer is **congruous** which means **proper and fitting**.
 3. (c) Since **pompous** means a person who takes himself too seriously, the correct answer is **humble**.
 4. (d) Since **hamstring** means to weaken a person or animal by cutting its tendons, the correct answer is **strengthen**.
 5. (b) Since **impulsive** means an action without much thought, the correct answer is **cautious**.
 6. (a) Since **affectation** means unnatural behaviour, the correct answer is **natural**.
 7. (a) Since **alley** means a narrow street, the correct answer is **wide road**.
 8. (c) Since **amoral** means not concerned with morals, the correct answer is **moral**.
 9. (c) Since **analogous** means similar, the correct answer is **not similar**.
 10. (a) Since **dissent** means disagreement, the correct answer is **agreement**.
 11. (c) Since **articulate** means having an effectiveness in speech, the correct answer is **incapable of effective speech**.
 12. (a) Since **bacchanal** means excited and wild, the correct answer is **sober**.
 13. (d) Since **benign** means kind, the correct answer is **malignant**.
 14. (d) Since **calculating** means shrewd and scheming, the correct answer is **artless**.
 15. (a) Since **camouflage** means to conceal or hide, the correct answer is **reveal**.

16. (c) Since *casual* means informal, the correct answer is *formal*.
17. (a) Since *catholic* means liberal and broadminded, the correct answer is *narrow-minded*.
18. (b) Since *chicken-hearted* means one lacking in courage, the correct answer is *full of courage*.
19. (b) Since *clandestine* means secret, the correct answer is *open*.
20. (c) Since *commodious* means having plenty of space, the correct answer is *cramped*.
21. (b) Since *compact* means closely packed, the correct answer is *diffuse*, that is loose.
22. (b) Since *consolidate* means to make solid or strong, the correct answer is *weaker*.
23. (a) Since *crabbed* means bad tempered, the correct answer is *composed*.
24. (c) Since *dainty* means delicate, the correct answer is *crude*.
25. (a) Since *deceit* means a lie, the correct answer is *truthfulness*.
26. (d) Since *degenerate* means to decay, the correct answer is *progress*.
27. (b) Since *derogatory* means damaging, the correct answer is *laudatory*.
28. (a) Since *economise* means to cut down expenditure, the correct answer is *over-spend*.
29. (b) Since *egalitarian* means equality of all citizens, the correct answer is *elitist*.
30. (a) Since *egocentric* means egoistic or self-centred, the correct answer is *altruistic* — a tendency of thinking in terms of other's welfare first.

VI (a) There has been a sharp criticism of the loan policy of the International Monetary Fund. The Third World countries have attacked its terms and conditions unsuited to the prevailing socio-economic conditions. The affluent countries are concerned with the debtor nation's inability to repay the principal and the interest. Some of the Latin American countries have debts mounting to hundreds of billions of dollars. India, however, has managed debt repayment very prudently to IMF's full satisfaction.

(b) The schools in industrial societies have an overt and a covert curriculum. While the overt curriculum varies from place to place, the covert curriculum is the same. The first ingredient of the covert curriculum is punctuality. It is a habit that every worker must possess. The second ingredient is obedience. In schools all kids are expected to be obedient. The third ingredient is a course in rote learning. The pupils in schools are drilled into routine, repetitive work. The schools always endeavour to turn out good workers. Since society is going to change, the content of education would have to be drastically changed.

(c) The destruction of forests has led to soil erosion which in turn leads to floods and droughts. The shortage of firewood forces the people to burn cowdung and crop wastes. The use of chemical fertilisers gives a good crop but soil fertility goes down. It leads to nutrient drain which eventually affects crop productivity. Intensive agriculture, based primarily on chemical fertilisers but not on organic manure and crop wastes going back to soil, leads to soil impoverishment.

(d) Erich Fromm is of the view that man's rootlessness and loss of identity have an adverse effect on his personality. Along with the satisfaction of his basic drives of hunger and sex, man also wants an affirmation of his being alive. This arises from his having a goal beyond his solitary existence. A man who drops out of society has an awareness of his impotence. He will do anything in order to overcome it.

VII New Education Policy

It was the Kothari Commission (1964-66) that laid stress on

the link between education and national development. It recommended a complete transformation of the prevailing system of education which has an elitist bias and is predominantly literary, bookish and divorced from the world of labour. The commission advocated the setting up of common neighbourhood schools, vocationalisation of higher secondary education and greater stress on science and technology in higher education. It also laid stress on the inculcation of moral values through education at all levels.

Nearly 20 years have passed but the transformation of the educational system has not taken place. Drop-out rate is 60 to 70% at the level of elementary education. There is no wonder that out of a population of more than 700m, approximately 70% are illiterate. We are still far from the goal of universalisation of elementary education. Vocationalisation at the higher secondary stage has not succeeded due to the shortage of equipment and non-availability of adequately motivated teachers.

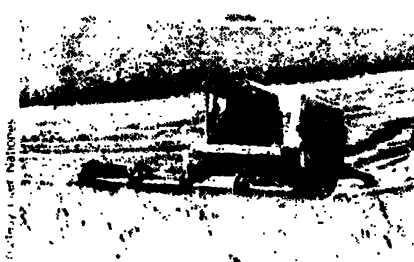
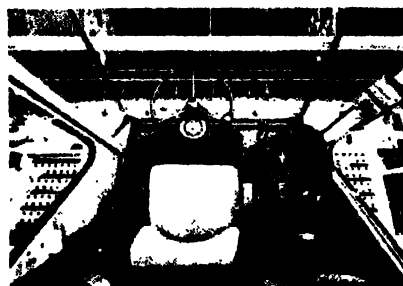
The failure of the scheme of vocationalisation at the secondary stage has led to overcrowding in colleges and universities. Out of nearly three million students at the undergraduate stage, 80% are poorly motivated. They are in colleges because they are not able to find suitable jobs. The new government has realised that India cannot enter the 21st century unless its educational system is fully transformed.

The Union Ministry of Education has published a document entitled *Challenge Of Education—Policy Perspective* on Aug 20, 1985. It has visualised a multi-pronged strategy for the transformation of the prevailing system of education. Universalisation of elementary education would be achieved through the expansion of the formal and the non-formal channels of education. Vocationalisation would begin at the beginning of the secondary stage from class VI level. It would be linked with job opportunities in industries, agriculture and the tertiary sector. Higher education would be meant primarily for those who have the aptitude which would be measured through scholastic aptitude tests.

It is expected that the *New Education Policy* would be ultimately evolved through an intensive debate both inside and outside Parliament. The Members of Parliament, industrialists, administrators, teachers, parents and students are expected to participate actively in the debate.

The finalised New Education Policy would be implemented from the next academic session.

WORK IN COMFORT



Within a short span of three decades, agricultural engineering has undergone a radical transformation thanks to modern agricultural engineering. Machines are fast replacing human beings in hard toil. And while stress is laid on functional performance and safety while devising such machines, due consideration is also given to physical comfort of machine operatives. One such machine, Commendator 116 CS—a harvester—thresher rolled into one—offers superlative ease of operation.

HOW TO TACKLE CAT-4

BY EDGAR THORPE

To do or not to do should never remain an unsolved question for an efficient manager. Quick decision-making ought to be as natural for him as breathing. Here's some more on how the manager-to-be can develop the skills necessary to handle the tough CAT that keeps a watch at the IIM doors.

Management has its relevance in the day-to-day functioning of every individual—at home, at play and at work. No wonder a course in business management has become almost the in-thing today. Management entrance exams including the Common Admission Test (CAT) conducted by the Indian Institute of Management (IIM's) are designed to assess the candidate's general, verbal, mathematical and analytical abilities. Inevitably, those with a sharp sense of observation and the ability to

reason logically would come out with flying colours.

In *How To Tackle CAT-1* (Sep '85), *How To Tackle Cat-2* (Oct '85) and *How To Tackle CAT-3* (Nov '85), we dealt with Sections 1 and 2 (Verbal Ability and Quantitative Ability), Sections 3 and 4 (Reading Comprehension and Quantitative Aptitude) and Section 5 (Data Sufficiency Tests) respectively. In this concluding part we present a detailed feature on Sections 6 and 7 (Business Judgment or Analytical Ability Test and Data Interpretation) for CAT.

BUSINESS JUDGMENT TESTS

Of all management problems, decision-making (to do or not to do) is the most difficult and requires highly professional and technical skills to achieve the desired results. In business organisations, decisions have got to be quick and on time, or the enterprise may soon be out of gear. Professional management of an enterprise requires a scientific mode of decision-making. It requires analysis of the situation, identifying the available alternatives and selection of the final course of action after weighing the pros and cons of all the alternatives. The selection of the right alternative to suit the situation is the art of scientific decision-making. With this end in view, most management courses these days lay emphasis on decision-making aptitude tests. Such tests include Data Evaluation (DE) and Data Application (DA)—broadly called Business Judgment or Analysis of Situation (AS) Test.

The basic idea behind this section is to present the candidate with a decision situation relevant to any commercial/business activity. The candidate is required to analyse the decision situation and answer the questions at the end.

DATA EVALUATION

The Format

This section contains two long passages, each consisting of 800-1,200 words. After each passage a pre-determined answer scheme is given,

which is followed by 15-20 questions. Each question is in the form of a sentence that conveys an idea that has to be classified in accordance with the instructions given in the answer scheme. The time allowed for the entire exercise comprising two passages is 30 minutes, which requires:

- Reading and comprehension of the passages
- Understanding the answer scheme
- Reading and understanding the questions
- Classifying the questions in accordance with the answer scheme.

Hence for each passage, you may allocate 15 minutes in which time you have complete the above exercise. This means to you should be able to read and comprehend the passage in eight minutes leaving six minutes to attempt the questions. This will leave you with a minute's time during which you can review the answer sheet. Similarly deal with the next passage. However, the time allocation can be changed depending on the size of the

passage and the number of questions asked.

This demands quick-reading and comprehension ability which you have to cultivate by reading long editorials and marking the speed of your reading. In other words you should be able to read above 1,000 words in less than eight minutes and simultaneously grasp the gist of the same. This is easily possible because the human brain is capable of responding to at least five stimuli in a second. Hence, a fast reader can read 300 words in a minute (five words per second). Therefore 30 minutes are more than sufficient to deal with this section provided you have practised and familiarised yourself with the format. This section has three parts, viz: (1) Decision situation (or the passage), (2) Instructions or answer scheme; and (3) Questions, each of which is discussed here with a recommended strategy to score high in the exams.

1. Decision Situation

The passage gives the decision situation in which somebody (the decision-maker) has to make a decision. From the passage you have to analyse the following information, viz:

- (a) The goal purpose of the decision-maker
- (b) The options (alternatives) open to achieve the goal
- (c) measurement/judgment of the best option that connects the goal and helps to achieve it.

While carefully reading the passage, note the following points by underlining the same:

- What is the decision required?
- Who is/are the decision-maker/makers?
- What are the options available and what are the constraints attached to each of them?
- What is the goal?

2. Instructions (answer scheme)

The instructions are classified in five parts into which the statements have to be classified, i.e.,

- (A) Major Objective



- (B) Major Factor
- (C) Minor Factor
- (D) Major Assumption
- (E) Unimportant Issue

(A) **Major Objective:** From now on for ease of reference we will call it (A). It is one of the outcomes or results aimed at by the decision-maker. The word 'major' implies that the option mentioned has a direct relationship with the final decision. (A) is therefore a final goal/aim or purpose/objective of the decision-maker that has to be achieved by him. The goal in question should be achieved at least partly, if not fully, by the achievement of the objective. (A) generally contains expressions of desire, i.e., what the decision-maker wants to achieve or what is important to him for the success of his business. For identification of (A) note the following generalised points:

- **Action noun:** The construction of the sentence clearly isolates the action noun related to the object/goal in question. For example: "reducing overheads to increase profitability", "expanding for diversification of business for growth of the company", "intensifying advertisement media to compete with bench-mark products in the market", etc. The first noun in the sentence should be an action noun or noun form of an action verb (making/looking/taking/overcoming/acquisition/reducing etc). It should refer directly to the state of affairs to be achieved/accomplished by the action of the decision-maker.

- **Positively phrased sentence:** This is another quality for identifying (A). For instance, a company is suffering losses and one way of stopping further loss is to close down that unit of the company which is suffering losses. Hence the major objective is not "to close down the unit not making profit" but to "stop the losses being incurred by the company". The latter is a positive expression.

There can be many (A)s in the passage as the decision-maker may have many other objectives of importance to him. They together help him to achieve the goals of the company.

(B) **Major Factor:** Referred to as (B) this is a factor which directly influences the decision and hence has a bearing on the achievement of the major objectives (A). In solving a particular problem a decision-

maker will have various alternative courses of action open to him. Major factor is that factor which directly influences the selection of a particular course of action by the decision-maker out of the alternatives available. Therefore, it is the major factor which plays a very important role at the time of the evaluation of the alternatives.

Major factors could essentially be of two types. First, those that are not in the control of the decision-maker, e.g., competitors retaliation to any move made by the decision-maker, government policies, general trends in the economy, behaviour of the consumers, etc. Second, those that relate to certain strengths and weaknesses of the company itself. If a company has certain weaknesses, then some alternatives may be rendered useless because they require the company to overcome these weaknesses which may not be possible easily. Hence, it has directly influenced the choice of alternative. The same argument applies for strengths because an alternative which utilises this strength would be better off in that respect as compared to others. The second category includes the strong preferences of the decision-maker which influence the final decision.

It should be noted that out of all those examples given above only those would be major factors which directly influence the decision-making.

(C) **Minor Factor:** Referred to as (C) this category includes those factors which are of less importance as compared to the major factors. Generally, they have a bearing on a major factor and through that they influence the decision and the attainment of (A). They do not have a direct influence on the evaluation of the alternatives. Even if they have a direct influence it will not be very significant for the decision itself.

(D) **Major Assumption:** Referred to as

(D) this is a feeling, idea, opinion or belief of the decision-maker which may or may not come true. It is the subjective opinion or belief of the decision-maker which has yet to be substantiated. But for an assumption to be classified as (D), it should have a direct influence on the decision. It should be an assumption on the basis of which the evaluation of the alternatives is carried out.

Some of the key words that help in identifying assumption are: probably, most probably, likelihood, presumption, assume, maybe and belief. However, these words only help us in identifying an 'assumption' and not the 'major assumptions'. To distinguish the latter from the former, it is necessary to see how important a bearing it has on the decision (or the evaluation).

(E) **Unimportant Issue:** The statement which lacks any significant impact or relationship to the decision is an unimportant issue.

It has no relevance or influence on the final goal or objective. However, it is present and an analytical mind can easily eliminate it from decision-making.

The classifications (A), (B), (C), (D), and (E) are all a part of the decision-making process, which can be understood easily from the following explanation:

Decision-making

This involves problem identification, problem solving and the decision:
1. What is the situation? 2. What is the desired change in the situation? 3. What factors influence the situation? 4. What courses of action (alternatives) are possible? 5. Which of the alternatives is the best and why? 6. What are the possible negative consequences of the best alternatives? 7. Decision.

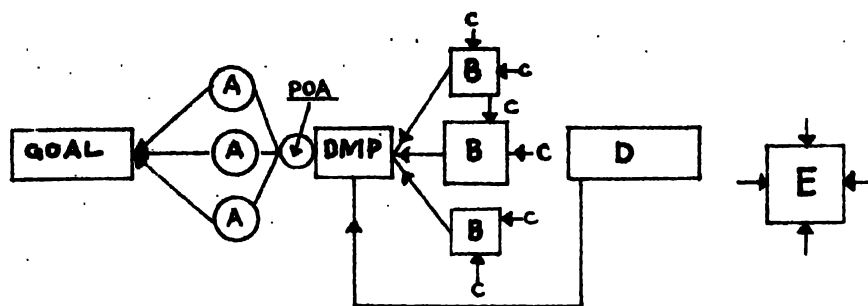
Comparison of Classification Answer Scheme & Identification on Differentiation Technique

(A) Major Objective	(B) Major Factor	(C) Minor Factor	(D) Major Assumption	(E) Unimportant Issue
That is the goal which the decision maker has to achieve It is something which the decision-maker desires.	This is the main factor influencing the decision. It is a consideration that is explicitly mentioned in the passage.	It is a secondary factor. It affects the decision-maker. It indirectly influences the final decision.	It is the decision-maker's personal feeling or assumption. It is something that the decision-maker takes for granted or assumes to be true.	It has no relevance to the decision.
It may be possible that the decision-maker may want to achieve several goals and therefore there may be several (A)s.		It is either a subset of the major factor or it is a factor which is unimportant as compared to the major factor	However, it is an important assumption because it influences the final decision.	

For ease of understanding, note the diagram on page 45 which describes the

answer scheme and the inter-relationship of the various factors:





* DMP—Decision Making Process (Evaluation of alternatives). A—Major Objective; B—Major Factor; C—Minor Factor; D—DATA APPLICATION TESTS

The second set of questions relating to Business Judgment Situation based on Data Application (DA). These are straight forward, multiple-choice questions relating to the information contained in the passages discussed under the Data Evaluation section. If the Business Judgment passage contains tables/charts, there may be questions pertaining to the same. There may be some computation questions as well requiring quick oral

Major Assumption, E—Unimportant Issue; POA—Plan of Action.)

calculations. The following hints should prove useful:

1. Be on the look-out for specific and relevant information appearing in the passage.
2. Make sure that your answers are based on the information provided in the passage. No outside information has to be used to answer these questions. You have to find the answer from the passage only.
3. Read instructions preceding each question. All questions may not be of the same type.

DATA INTERPRETATION TESTS

Statistical data is presented through tables and diagrams (graphs). The object of these two techniques of data presentation is to project the quantitative information in such a form that it may appear interesting and becomes easily comparable. In CAT as well as in other competitive exams, there is a section on Data Interpretation. In order to tackle this section successfully one should familiarise oneself with the various forms of questions that are asked and the various types of tables and diagrams (graphs) commonly given in the exams.

Types Of Question

1. **Comparison of data:** The maximum and minimum figures are compared from the information given in the table/graphs.
2. **Average calculation:** Calculation of averages based on the information contained in the tables/graphs.

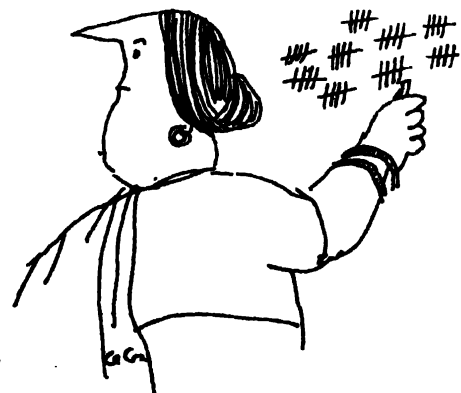
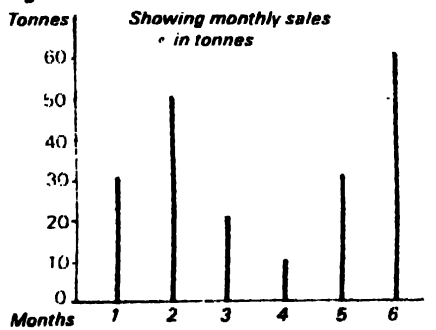


Fig.1



(Fig. 2)

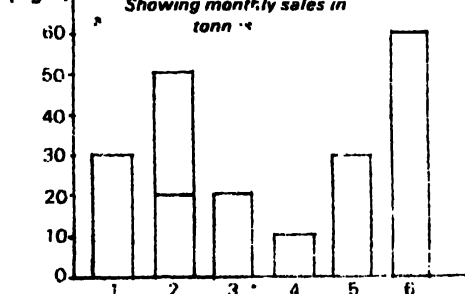


Fig. 3

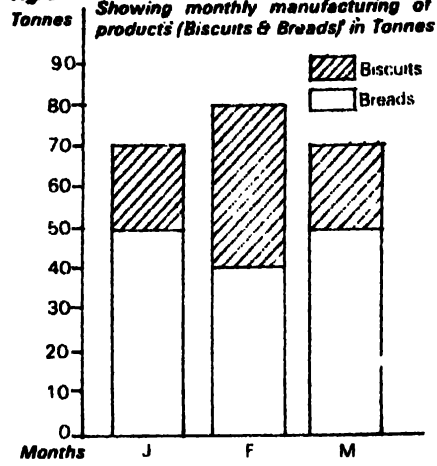
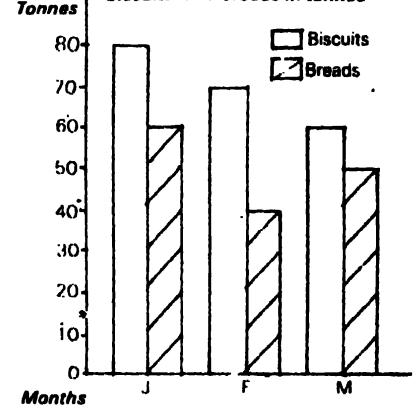
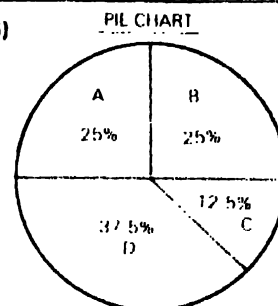


Fig. 4 Showing monthly production of biscuits and breads in tonnes



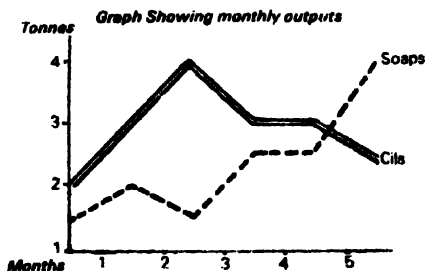
(Fig. 5)



A = Packing cost
B = Transport cost
C = Labour cost
D = Raw material cost

(Fig. 6)

	Jan	Feb	Mar
Biscuits	20	40	20
Breads	40	30	40
Total	60	70	60



(Continued on page 58)

Practice Tests

In preparing these tests, we have tried to visualise the questions you are likely to face in your actual exam. Great care has been taken to frame questions which are of the same standard as those you'll encounter in your exam.

Rating : Evaluate your performance on the basis of the following score-card :

100 questions in 60 minutes – Excellent
60 questions in 60 minutes – Good
50 questions in 60 minutes – Fair
35 questions in 60 minutes – Poor

Tips : 1. Do not waste time over questions you are not sure about. 2. Give the problems some thought before choosing the answers. 3. Read the directions carefully before answering the questions. 4. Do not try to guess the answer.

Business Judgment Tests

FOR CAT

Having familiarised yourself with the last two sections of the Common Admission Test (CAT), get set to assess your business acumen under stress.

Time: 55 minutes.

Scores: 1. Give yourself one mark for each correct answer. 2. Deduct one mark for each wrong answer. Then rate yourself as follows: Excellent...39-44 Very Good...33-38 Good...27-32 Fair...21-26 Poor...Below 21.

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the question. Answers are given at the end of these tests.

Passage No. I

Mr Shah, the young Marketing Manager of Excellent Product Group, was deeply lost in his thoughts. He was wondering what course of action, if any, he should take to maximise the gains out of the opportunity which he had suddenly chanced upon.

Excellent Product Group was a medium-sized company, dealing in consumer durables, with a turnover of about Rs 10 crores a year. Mr Shah had been associated with the company for the last five years, during which he had been able to increase the turnover from Rs 2 crores to the present level. It was a highly creditable performance.

That afternoon, Mr Shah had met Ramesh Vaidya, an old friend, successfully settled in the US. He was working at a very high level in the design department of a computer company reputed for turning out very high quality products which successfully compete with the products of giants like IBM and CDC in US market. His company was looking for a marketer in India who could sell the latest version of their model of personal computer, branded in the US as 'MINI-X'. Vaidya had told Mr Shah that if he wanted a contract could

easily be drawn up in favour of Excellent Product Group. The contract would give him the sole distributorship which could in later years be phased out gradually to a manufacturing licence (essentially assembly operation licence).

The offer was attractive. The personal computer market was a market with a potential of around 100 crores a year at present. Mr Shah felt that any company which had the advantage of entering early in this market could easily get and maintain a fairly large market share. If the growth in the industry was realised, with the increasing potential the profitability of the business would be very high.

The computer market was marked with a very high rate of technological obsolescence and therefore it was very important to have access to the latest technology on an ongoing basis. Quality and after sales service were other important elements. Quality seemed to be assured considering the reputation of the company in the US. However, Mr Shah thought that establishing a good after sales service network would be crucial. He was not sure how it could be done. Recruiting good quality computer personnel in India was a very difficult task. Training them in after sales

service, which involved maintenance of the operating system, would also be a difficult and costly proposition. Establishing permanent centres in some big metropolitan cities and industrial towns which were expected to provide a major proportion of the total sales, was also going to call for a large investment.

Creating awareness about different kinds of application areas for which a personal computer could be used would also involve a lot of investment in advertising.

Furthermore, the cost structure in the industry is changing very fast. Costs are falling with better technology, and this coupled with an increase in competition is now resulting in a fall in the price. There is a great deal of uncertainty about the way in which the present level of high per unit profits will change. This increases the risk associated with the investment. Uptil now the company has been dealing in stable mature markets where various factors influencing the business could be easily predicted. But the computer industry, on the other hand, is highly fluid. Mr Shah felt that the risk is even higher for Excellent Product Group because it does not have any manufacturing facility for electronic products. Even for simple assembly operations in the future, the initial investment is going to be high. Mr Shah was therefore looking for ways in which he could reduce the risk associated with the venture.

Since the market was new, he did not have a clear idea as to how the product should be priced and promoted. Should he price it very low and reap the benefits of large volume of sales? Or should he price it high enough in the beginning to skim the market? What kind of competition does he foresee in the market? Will it be focussed on price or quality? How should he promote the product? In Mr Shah's opinion, advertising with emphasis on providing a lot of useful information to the customer

should be a good promotion strategy. However, he was not confident. What if the customers did not respond well? He would be unnecessarily extending himself by investing heavily in advertising. The cash position of the company was already constrained because of the rapid growth which the company had maintained in the preceding five years. Availability of cash was crucial for entering the personal computer industry.

DATA EVALUATION

Directions : The statements given in this section relate to the preceding passage titled Business Judgment Test Passage No. 1. Based on your analysis of the situation narrated in the passage, evaluate (classify) each of the following conclusions in any of the five categories listed here:

- (A) **Major Objective :** If the sentence relates to one of the main goals sought by the decision-maker i. e., the outcome or result sought by the decision-maker, mark it (A).
- (B) **Major Factor :** If the sentence relates to a major factor in arriving at the decision, an important aspect of the problem and is basic in determining the decision, mark it (B).
- (C) **Minor Factor :** If the sentence has either a direct but minor influence on the decision or an indirect influence by affecting one of the major factors, mark it (C).
- (D) **Major Assumption :** If the sentence is a projection or supposition made by the decision-maker before weighing the variables, mark it (D).
- (E) **Unimportant Issue :** If the item has an insignificant impact or relationship to the decision, mark it (E).

Statements :

1. Capitalising on the opportunity of entering the personal computer industry.
2. Mr Shah's experience of five years in working with Excellent Product Group.
3. Vaidya's company's success in competing against computer giants like IBM and CDC in the US.
4. Changing cost structure due to technological advancement.
5. Amount of investment required in Advertising and providing after sales service to make the venture a success.
6. High rate of technological obsolescence in the industry.
7. Providing useful information to the customer in the advertisement would help in ensuring the success of the advertisement campaign.
8. Reduction in the risks associated with entering the computer industry.

9. Increasing competition in the personal computer industry in India.
10. Ensuring that this venture does not adversely affect the sales of the existing products of the company.
11. Falling prices of computers in the personal computer industry.
12. Capturing a market share at this early stage would ensure high profitability in the future.
13. Excellent Product Group's past experience only in stable mature markets.
14. Increase in the long-run profitability of Excellent Product Group.
15. Constrained cash position of Excellent Product Group.

DATA APPLICATION

Directions: Questions here pertain to the Business Judgment Test passage given earlier. Answer each of the following questions using information contained in the passage. The answer choice has to be based on the five possibilities given under each question:

1. The personal computer industry in India is characterised by
 - (i) International giants like IBM and CDC.
 - (ii) A high rate of technological obsolescence.
 - (iii) Potential for high growth in the future.
 - (iv) Decreasing price levels.
2. The decision-maker is faced with the task of
 - (i) Deciding whether he should enter the personal computer industry.
 - (ii) Reducing the risk associated with entry into the industry.
 - (iii) Deciding how he should promote the product.
3. The factors contributing to the high risk associated with entering the personal computer industry are
 - (i) High advertising expenditure needed.
 - (ii) Highly unstable profits.
 - (iii) Heavy expenditure on after sales service.
4. The factors which contribute to making this opportunity attractive for the com-

pany are

- (i) Quick profits.
 - (ii) Growing market.
 - (iii) Availability of latest technology.
 - (iv) Early entry into the market.
- (a) I only
 - (b) I and III only
 - (c) II and III only
 - (d) I, II and IV only
 - (e) II, III and IV only
5. Reasons for decrease in the price of personal computers are
 - (i) Cheaper component availability.
 - (ii) Advancement in technology.
 - (iii) Increasing competition.
 - (iv) A change from sellers market to buyers market.
 6. Some of the weaknesses of the company which are hindering it from entering the market are
 - (i) Only five years of work experience of Mr Shah
 - (ii) Constrained cash position.
 - (iii) Lack of electronics manufacturing facility.
 - (iv) Lack of electronics in such an industry.
 7. The crucial elements of strategy in case Mr Shah decided to enter the industry would be
 - (i) Pricing.
 - (ii) Promotion.
 - (iii) After sales service.
 - (iv) Quality.
- (a) I and II only
 - (b) I, II and III only
 - (c) II, III and IV only
 - (d) I, II and IV only
 - (e) I, II, III and IV

Passage No. II

To negotiate is always quite difficult. It is like a game of chess where you anticipate the moves of your rival in advance, build your strategies on it and then be prepared to respond effectively if your initial assumptions are wrong. There are many other factors also at work—the charisma of the negotiator's personality, his persuasive power, his understanding of the background.

Mr Aditya mused. His mind was struggling to come to grips with the situation which, as a negotiator, he found himself in. The negotiations were about to begin.

He had to prove to Mr Anderson, the representative of ACG (Auto Control

Group, a US-based large multinational), why his company CRG (Control Research Group, an Indian public limited company) was a better candidate for the transfer of technology, in the area of a high technology process control system for chemical industries, than any other company in India. CRG was a medium-sized company with an impressive growth record (around 15% p.a.) and had a good research and development base of its own. However, it was nothing in size compared to other giants in the field. Aditya was sure that at least two such big companies were in the fray to fight for this technology. What should he be willing to give to Mr Anderson? The issue of transfer of technology was intimately linked to the terms and conditions of payment that were going to be offered to ACG. What should these be? A still more important issue was the objectives he should set for himself in the negotiations. It was all still nebulous. What should he seek and under what circumstances?

The attractiveness of this technology lies in the fact that it is a comparatively new technology and is revolutionary in its novelty of approach. Any price which Mr Aditya offers would be closely linked to the estimate of profits that he expects from this venture. Such revolutionary ideas develop very dynamically and as time progresses many latent areas of application are discovered which can be profitably utilised. Therefore, Mr Aditya had to decide what potential could be realised from the new technology. Analytically, it is equivalent to finding out what will be the shape of the growth curve of this technology. Furthermore, he had to consider what kind of stimulus this technology could provide to his research and development base.

Mr Aditya also had to estimate the price Mr Anderson expected for this technology. This would be closely linked to Mr Anderson's perception of the kind of growth this technology's applications were capable of realising. This would also depend on the motive behind Mr Anderson's readiness to sell this technology to India. Were there other factors at work, such as a competitor who was developing a better process control system and could be expected to swamp the market with his idea? Mr Aditya also had to consider whether Mr Anderson knew the price's being quoted by the two competitors for this technology. Another important factor was to anticipate what Mr Anderson desired. Hard cash/immediate payment or a share in the long term profitability of the technology in India? Did he want a longer association with an Indian company to figure out what kind of needs existed in the Indian market? Was he therefore, looking

for a foothold in India to be able to sell other products and ideas to the Indian market in future? The Indian market due to recent liberalisation in import of technology was becoming highly attractive for companies like ACG.

So much depended also on Mr Anderson's personal biases, personality traits, preferences and value system. How should Mr Aditya receive him? Mr Aditya knew that striking a good relationship with Mr Anderson was of considerable importance. So how should he present himself? Should he be forthright and candid or the smart type who talks business all the time?

Time was short. There were only two hours scheduled for the first round of negotiations which was the most crucial time to make a positive impact. Mr Aditya had been working consistently for the past 10 hours since the morning. He had successfully resolved some of the issues but things were still quite nebulous. However, through his past experience he knew that his brain would become razor sharp in the presence of Mr Anderson and, as it happened very often, many of the decisions he had to take would come out of momentary, brilliant, intuitive insights he would be able to gain during the course of discussion. Negotiation is an art, he smiled to himself, and he knew he was very good at that.

DATA EVALUATION

Directions: Following statements have to be attempted in the same manner as was done for Passage No. I.

Statements

1. The price that is demanded by Mr Anderson for the technology that he is offering.
2. Striking a good bargain and getting the technology from Mr Anderson.
3. The possibility of finding new and profitable applications of the technology over time.
4. Mr Anderson's biases, personality traits, preferences and value system.
5. Mr Anderson's knowledge of the prices offered by the competitors.
6. CRG's growth record of 15% p.a. and a good research and development base of its own.
7. The existence of two more companies in the fray to fight for this technology.
8. Terms and conditions of payment offered by CRG to ACG.
9. A short time of only two hours for the negotiations.
10. The shape of the growth curve this technology will take.
11. The stimulus this technology is going to provide to CRG's research

and development base

12. Mr. Aditya's ability to get brilliant intuitive insights in the course of negotiation.
13. The charisma of the two negotiating personalities and their persuasive power and understanding of the background factors that are at work.
14. Mr. Aditya's decision on the attitude he should adopt during the negotiations: candid and forthright or that of a person who is smart and talks business all the time.
15. Mr. Aditya's estimate of the price Mr. Anderson expected for the technology.
16. Striking a good relationship with Mr. Anderson.
17. CRG is a public limited company.

DATA APPLICATION

Directions: Questions here pertain to the Business Judgment Test Passage No. II. Answer each of the following questions using information contained in the passage. The answer choice has to be based on the five possibilities given under each question:

1. The disadvantages faced by CRG vis-a-vis the other competitors for the technology are
 - (i) Its small size.
 - (ii) Its growth rate.
 - (iii) Its inability to pay a high price
 - (a) I only
 - (b) I and II only
 - (c) I and III only
 - (d) II and III only
 - (e) I, II and III
2. The strengths which CRG has which could stand it in good stead during the negotiations are:
 - (i) Its connection with the chemical industry
 - (ii) Its strong research and development base.
 - (iii) The good negotiation capabilities of Mr Aditya.
 - (a) II only
 - (b) III only
 - (c) I and II only
 - (d) I and III only
 - (e) II and III only
3. What made the technology attractive to CRG?
 - (i) New technology in India
 - (ii) Possibilities of having many other applications in the future.
 - (iii) Possibilities of stimulating its research and development.
 - (a) I only
 - (b) II only
 - (c) I and II only
 - (d) I and III only
 - (e) I, II and III
4. What are some of the qualities of a good negotiator?

- (i) Insight into opponents mind.
 (ii) Ability to persuade and convince.
 (iii) Aggressiveness
 (a) I and II only
 (b) I and III only
 (c) II and III only
 (d) I only
 (e) I, II and III
5. What was Mr Aditya confident about just before he went in for the negotiations?

- (i) His company's strength
 (ii) His momentary insights during the negotiations.
 (iii) His ability to negotiate.
 (a) II only
 (b) III only
 (c) I and III only
 (d) II and III only
 (e) I, II and III

E.T

Data Interpretation Tests

FOR CAT

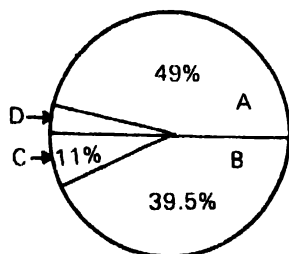
And now the very last section of the Common Admission Test (CAT). Juggle with these data interpretation tests to orient your interpreting abilities under stress.

Time: 67 minutes.

Scores: 1. Give yourself one mark for each correct answer. 2. Deduct one mark for each wrong answer. Then rate yourself as follows: Excellent.....45-50 Very Good.....39-44 Good.....33-38 Fair.....27-32 Poor.....Below 27

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the question. Answers are given at the end of these tests.

Graph showing cost of production of a firm



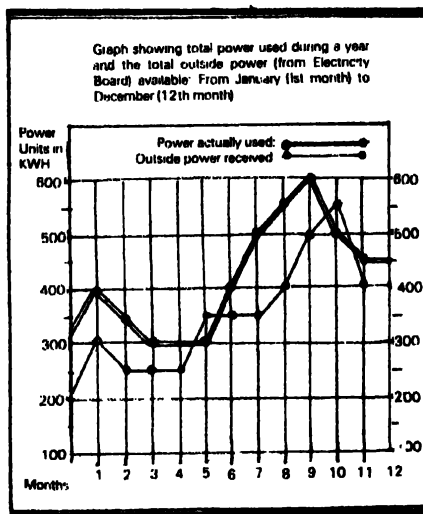
A = Raw material cost
 B = Packing material cost
 C = Fixed manufacturing expenses
 D = Labour cost

I Study the above graph and answer the following questions:

- What was the average annual growth rate between 1970-71 and 1975-76?
 (a) 10% (b) 30%
 (c) Zero (d) 20%
- Which year registered maximum growth rate?
 (a) 1983-84 (b) 1976-77
 (c) 1972-73 (d) 1982-83
- 1975-76 registered an output of 5.0 lakh tonnes and 1980-81 registered an output of 5.5 lakh tonnes. What was the growth rate in 1980-81 over 1975-76?
 (a) 10% (b) 1%
 (c) 2% (d) 9%
- Which year generated NIL growth?
 (a) 1970-71 (b) 1981-82
 (c) 1982-83 (d) None of the above
- What was the compounded annual

growth rate between 1982-83 and 1984-85?

- (a) 10% (b) 15%
 (c) 16.5% (d) 33.3%
6. If the growth rate in 1985-86 was the same as the growth rate in 1981-82 what would be the output in tonnes in 1985-86?
 (a) 8.67 lakhs (b) 8.72
 (c) 8.67 (d) 8.72 lakhs



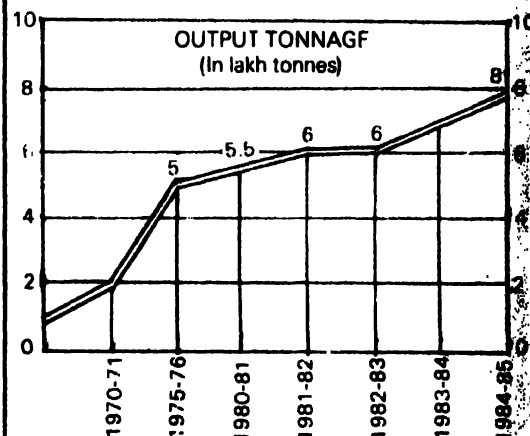
II Study the above graph and answer the following questions.

- How many KWH were used in the first four months of the year under review in the graph?
 (a) 1,050 (b) 1,350
 (c) 1,250 (d) 1,200
- How many KWH had to be generated from own generators during the first four months under review to cover

the shortfall from supplies ex Electricity Board?

- (a) 1,350 (b) 250
 (c) 300 (d) 1,050
- What was the total cost of power consumed between January-April?
 (a) Rs 675 (b) Rs 525
 (c) Rs 787 (d) Rs 750
- How many KWH had to be generated ex own generators between January and August?
 (a) 750 (b) 700
 (c) 600 (d) 650
- What is the average monthly cost of electricity used in this industry as per data given on the graph?
 (a) Rs 212.50 (b) Rs 271.80
 (c) Rs 228.12 (d) Rs 270.50

6. In which months was maximum power generation made from own sources of generation?
 (a) Aug/Sep (b) Jul/Aug
 (c) Oct/Nov (d) Sep/Oct
7. What was the difference between the total power actually used and the power which was received from the Electricity Board in the first six months of the year?
 (a) 300-KWH (b) 450 KWH
 (c) 350 KWH (d) 400 KWH
8. In the last six months of the year more power was consumed as per the curves shown in the graph. Calculate the percentage increase over the first six months utilisation.
 (a) 40% (b) 38%
 (c) 49% (d) 46%

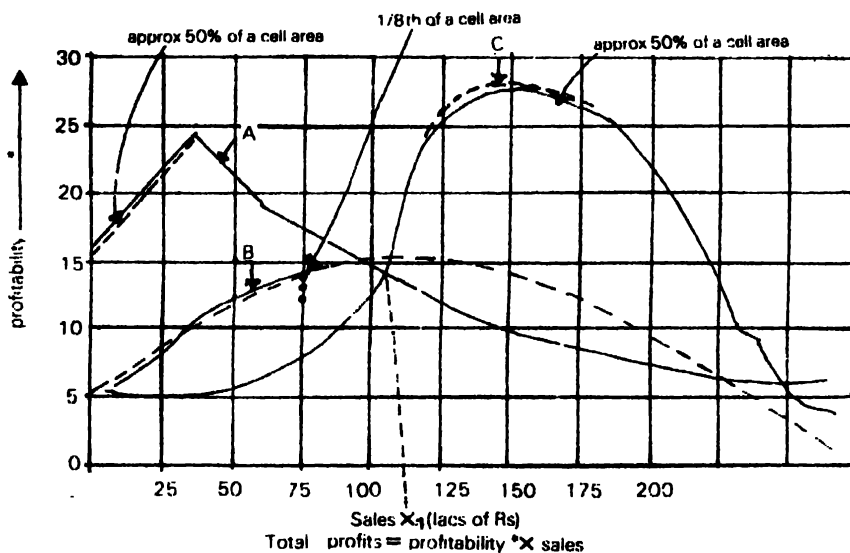


III Study the above graph and answer the following questions:

- If the total values in rupees of all sectors is Rs 128.3 lakh, calculate the value of D in rupees?
 (a) Rs .06 lakh (b) Rs 0.6 lakh
 (c) Rs 0.006 (d) Rs 6.0 lakhs lakh
- Packing and raw material costs together represents --- of the total cost of production.
 (a) Rs 88.5 lakhs (b) Rs 111 lakhs
 (c) Rs 113.5 (d) None of the above

3. If the total cost of production is Rs 128.3 lakh, what is the share of packing material cost alone?
(a) Rs 58 lakhs (b) Rs 39.5 lakhs
(c) Rs 57.0 lakhs (d) 50.7 lakhs
4. If the total cost of production doubles in a period of one year, what will be the value of D?
(a) Rs 10.3 lakhs (b) Rs 1.3 lakhs
(c) Rs 0.13 lakh (d) Rs 13 lakhs
5. If there is an increase of four times in the cost of packing material (from original cost of Rs 50.7 lakhs) what will be the total cost of production?
(a) Rs 200.8 lakhs (b) Rs 278.4 lakhs
(c) Rs 274.8 lakhs (d) 250.0 lakhs
6. Total cost of production increases five times of Rs 128.3 lakhs, what will be the increase in percentage in labour cost?
(a) 57.6% (b) 400%
(c) 513.2% (d) 56.45%
7. If total cost of raw material becomes four times of Rs 62.8 lakh, calculate percentage increase?

- (a) 400% (b) 25%
(c) 300% (d) 250.4%
8. What is the increase in packing material in rupees if it increases by 2% and cost of total production remains Rs 128.3 lakh?
(a) 25.6 lakhs
(b) 2.56 lakhs
(c) 53.24 lakhs
(d) None of the above
9. If raw material cost increases by 20.4% and other costs remain at the same absolute levels, what would be the share of raw material cost in the resulting graph?
(a) 50% (b) 49%
(c) 53.7% (d) 53.1%
10. If the cost of total production increases to 147.5 lakh from 128.3 lakh due to increase in the fixed manufacturing expenses with other costs remaining at the same absolute levels it implies that the fixed manufacturing expenses have increased by
(a) 54% (b) 78.67%
(c) 136.3% (d) 103.25%



IV Study the above graph and answer the following questions:

1. If all the three competitors have similar sales volume of Rs X_1 lakh, which competitor is earning the maximum profit?
(a) A (b) B
(c) C (d) None of the above
2. Suppose company B's operating point is 125 lakhs. If additional cost to be incurred to increase the sales to 200 lakhs be 5 lakhs, the net profit earned would be:
(a) 4.12 lakhs (b) 1.21 lakhs

- (c) 5.0 lakhs (d) 3.75 lakhs
3. Suppose the total market size is 300 lakh and the market shares of A, B and C are 16.7%, 33.3% and 50% respectively. If C tries to gain 8.33% of the market share from A and compensates A for the loss that A makes, what profit will C be finally making.
(a) 1 lakh (b) 1.25 lakhs
(c) 3 lakhs (d) -1 lakh
4. If C tries to wrest the same market share from B, and compensates B exactly as he would compensate A, as per question 3, what profit does he make?

- (a) 4.1 lakhs (b) 6.0 lakhs
(c) -1 lakh (d) 3.28 lakhs
5. If due to a certain cost reduction programme, profitability of B at every point improves by 20% and C still tries to apply the same scheme as would be employed in question 4, what will his profits be?
(a) -0.9 lakh (b) 0.9 lakh
(c) -1.62 lakhs (d) 1.3 lakhs
6. In the present situation i.e. A, B and C having market shares of 16.7%, 33.3% and 50% respectively, what is the ratio of profits of A to profits of B, approximately. Assume the curved portion of B to be a straight line.
(a) 1 : 2 (b) 2 : 1
(c) 1 : 1 (d) 1 : 1.54

MENTAL ABILITY TESTS

DIRECTIONS: For each of the following questions tick mark the choice that best answers the questions. Answers are given at the end of the test.

1. If CYCLE = 6 and SCOOTER = 8, then DRIVER = ?
(a) 7 (b) 10
(c) 9
2. If Book = 10 and SHELVES = 14, then CUPBOARD = ?
(a) 12 (b) 14
(c) 18
3. If DOORS = 15 and WINDOWS = 19, then LOCKS = ?
(a) 15 (b) 14
(c) 13
4. If DATE = 30 and FADE = 16, then BAT = ?
(a) 25 (b) 23
(c) 28
5. If CLEVER = 60 and HONEST = 81, then BORE = ?
(a) 40 (b) 38
(c) 57
6. If CODE + VOTE = 89, then COAT + LOAD = ?
(a) 71 (b) 74
(c) 85
7. If HOTEL - FOOD = 20, then RESTAURANT = ?
(a) 137 (b) 80
(c) 52
8. If TALLOR - SHIRT = 9, then COOK + FOOD = ?
(a) 82 (b) 85
(c) 92
9. Insert the missing number:

CAGE	BEG	BIDE
+ FAD	- HID	- FADE
= 2227	= 563	= 7200
(a) 2	(b) 3	
(c) 5		
10. Which two letters come exactly in the middle of the English alphabetical order?
(a) NO (b) MN
(c) NM

11. If English alphabets are numbered in a backward sequence (i.e. Z = 1 and A = 26) what will be the number of letter "T"?
- (a) 20 (b) 6
(c) 7
12. What will be the number of letter "P" if "A" is allotted number "4"?
- (a) 17 (b) 16
(c) 19
13. If BLOCK is coded as "CMPDL", what will be the code for HOUR?
- (a) PUIS (b) IPUS
(c) IPVS
14. "GO AHEAD" is coded as "HPBIFBE". Code for "STOP NOW" is
- (a) PTOXUA (b) TUPOOPX
(c) TUPQOXP

Directions: Use the following set of figures to answer questions 15-18:

- 5 7 5 7 5 5 7 5 7 7 5 7 5 5 5 7 5 7 7
15. How many 5's are preceded by 5?
- (a) 2 (b) 3
(c) 4
16. How many 7's are followed by 5?
- (a) 6 (b) 5
(c) 4
17. How many 5's are followed by 7?
- (a) 6 (b) 7
(c) 5
18. Which figure comes exactly in the middle?
- (a) 5 (b) 7
(c) none
19. Insert the missing letter "E N S J ?"
- (a) T (b) K
(c) X
20. Insert the missing letter in "B C E J ?"
- (a) P (b) X
(c) Y

- (a) YEHOCK (b) YEOHCK
(c) EYOHCK (d) EYOHKC
(e) EYHOCK
12. Find the odd man out:
- (a) Falcon (b) Swan
(c) Vulture (d) Eagle
(e) Hawk
13. If two-third kg of sugar costs one-third of a rupee then how many kgs of sugar can be bought for two and one-third of a rupee?
- (a) $\frac{1}{56}$ (b) $\frac{7}{72}$
(c) $\frac{72}{7}$ (d) $\frac{56}{12}$
(e) None of the above
14. INTERRUPT: SPEAK is the same as
- (a) Shout: Yell (b) Intrude: Enter
(c) Interfere: Assist (d) Telephone: Telegraph
(e) Concede: Defend
15. If CRICKET is written as CTCKREI; then RUMANIA will be written as
- (a) ARAIUMN (b) RAAIUMN
(c) ARAUINM (d) AARUINM
(e) None of the above
16. If 'Tea is sweet' is written as 'sue cho rye'; 'Sita drinks tea' is written as 'cho ber kim'. 'Sita is sweet girl' is written as 'rye kim sue bis' and 'Tea is hot' is written as 'sue kora cho'; then which word means girl.
- (a) kim (b) be
(c) cho (d) bis
(e) rye
17. How many statements in the above question are not required to answer it?
- (a) One (b) Two
(c) Three (d) None of the above
(e) Cannot be answered
18. Rame is going in the direction of the setting sun. On the way she finds a yellow building on her left and after some distance a green building on her right. The yellow building is to the _____ of the green building.
- (a) South (b) East
(c) South east (d) South-west
(e) West
19. If sea is called mountain, mountain is called river, river is called sky and sky is called planet, then sea will be known as
- (a) Sea (b) Mountain
(c) River (d) Sky
(e) Planet
20. If 'A' means multiplication; 'B' means summation 'C' means division and 'D' means subtraction then 150 can be written as
- (a) (15 D 3) A 12 B 6
(b) (15 B 3) A B B 6
(c) (15 C 3) A 30
(d) All of the above
(e) None of the above
21. SCHOOL: DISCIPLINE is the same

Test Of Reasoning

BY P. R. SAXENA

FOR POs & CAT...

This selection of questions on verbal reasoning is designed to help you in the forthcoming Bank PO and IIM CAT exams. Attempt the questions in order to assess your performance and further eliminate your weak spots, if any.

Scores: 1. Give yourself one mark for each correct answer. 2. Deduct one mark for each wrong answer.

DIRECTIONS: For each of the following questions, tick mark the choice that best answers the question. Answers are given at the end of these tests.

1. What is the ninth letter on the left of the ninth letter starting from the end of the alphabetic series?
- (a) Z (b) A
(c) J (d) I
(e) H
2. Find the odd man out:
- (a) Cricket (b) Hockey
(c) Football (d) Volleyball
(e) Tennis
- Directions:** In questions 3-7 certain names have been given but their spellings have got jumbled up. Indicate the correct answers from the given options.
3. Name of an emperor
- (a) YRGBU (b) MHREMO-TRETE
(c) YILECCB (d) YLAIRBR
(e) PNDENALA
4. Name of a game
- (a) ULACIEBNPR (b) PNOENALE
(c) YILECCB (d) ELNBIR
(e) YRGBU
5. Name of a political party
- (a) MHREMO-TRETE (b) YILECCB
(c) YLAIRBR (d) ULACIEBNPR
(e) ELNBIR
6. Name of an instrument used by

- doctors
- (a) ELNBIR (b) YLAIRBR
(c) YILECCB (d) MHREMO-TRETE
(e) PNOENALE
7. Name of a vehicle
- (a) ELNBIR (b) YRGBU
(c) PNOENALE (d) YLAIRBR
(e) YILECCB
8. If MASTER is written as PCVVHT, then PHILIP will be written as
- (a) SJLOLS (b) SJKOLS
(c) SJKNLS (d) SJLNLR
(e) SJLNLS
9. If \rightarrow means multiplication, \leftarrow means summation, $-$ means division, \times means subtraction and $+$ means equal to, then
- $\{[(257 \times 245) \leftarrow 288] \times 295\}^2 + ?$
- (a) 33.295 (b) 125
(c) 7.83.225 (d) 25
(e) None of the above
10. Complete the series
- g-i-kk-m-oo-
- (a) g-j-lm-p-p (b) g-k-m-n-p-p-q
(c) h-j-l-n-p-q (d) h-j-m-n-p-q
(e) None of the above
11. If BILLIARD is written as RDIBIAL, then HOCKEY will be written as

- as
- (a) Pupil: Dean (b) Report card: Marks
- (c) Society: Conformity (d) Underworld: Gangster
- (e) Hospital: Cleanliness
22. There are five girls Monalisa, Mona, Mohini, Monika and Madhu. Mohini is younger to Monalisa, Monika is elder to Mona, Madhu is younger to Mohini, Monalisa is younger to Mona and Monalisa is younger to Monika. Who is the eldest?
- (a) Monalisa (b) Mona
- (c) Mohini (d) Monika
- (e) Madhu
23. In the above question how many statements are not required to answer it?
- (a) One (b) Two
- (c) Three (d) None of them
- (e) All of them
24. If $4 \times 6 = 42$
 $5 \times 7 = 63$
 then $6 \times 8 = ?$
- (a) 84 (b) 108
- (c) 86 (d) 88
- (e) None of the above
25. My grandfather had one son, one brother who never married and seven sisters. My father's uncle's sister's brother's son is my
- (a) Son (b) Father
- (c) Grandfather (d) Cousin
- (e) Brother
26. Five friends are sitting in a circle I Raja is directly opposite to Sita II Mohan is in the exact middle of Raja and Gopal. III Rita is directly opposite to Mohan. This means Rita is sitting between
- (a) Raja and Mohan
- (b) Mohan and Gopal
- (c) Gopal and Sita
- (d) Sita and Raja
- (e) Raja and Gopal
27. Kashmir is in the north of India. Assam is in the north-east of India. Kashmir is to the — of Assam.
- (a) North (b) East
- (c) North-east (d) South-east
- (e) West
28. The son of the wife of the brother of the sister of my mother is my
- (a) Brother (b) Uncle
- (c) Father (d) Cousin
- (e) None of the above.
29. FALL: PAIN is the same as
- (a) Flying: Walking
- (b) Food: Calories
- (c) Disobedience: Punishment
- (d) Laugh: Cry
- (e) Swim: Enjoy
30. If BATRA is written as BCBSU then MAJESTIC will be written as
- (a) DLHBURIF (b) MAGFTUJD
- (c) DLHBRUIF (d) DLHBUIRF
- (e) DNJBKUTF

ANSWERS

Business Judgment Tests

Passage I

Data Evaluation

1. (a) This has been explicitly stated as an objective of Mr Shah in the first paragraph of the passage.
2. (e) This has just been mentioned in the passage. But his having worked in the company for the last five years does not in any way affect the decision.
3. (c) The fact that Vaidya's company has successfully competed against IBM and CDC implies that it is technologically strong which is a major requirement for success in India. Since it indirectly influences the decision by assuring good quality it is a minor factor.
4. (b) Technological advancement has reduced cost which directly influences profitability which is one of the objectives and hence it is a major factor.
5. (b) Since the amount of investment is heavy it directly influences the decision.
6. (b) This makes it necessary to have a continuous source of supply of up-to-date technology and is hence a major factor.
7. (e) This is an assumption but it is irrelevant to the decision at hand. Deciding on the advertisement campaign would come only after deciding whether the company should enter this industry in the first place.
8. (a) This has been explicitly stated in the last line of the seventh paragraph.
9. (c) This indirectly influences profitability by leading to a reduction in price (which is a major factor) and hence it is a minor factor.
10. (e) This could be an objective but there is no mention of it in the passage. We cannot assume anything beyond what is given in the passage.
11. (b) This directly affects the profits that can be realised and hence it is a major factor.
12. (d) This is an assumption or expectation of Mr. Shah and may not actually happen. Since it directly leads to the achievement of long-term profitability, it's a major assumption.
13. (c) Since the company has not ventured into fluid markets like the computer market it may not be that confident and hence this does have a direct influence on the decision. But the influence is very weak, hence this is a

minor factor.

14. (a) In the fourth paragraph it is clear that Mr Shah is finding the industry attractive because of its high potential for profits in the future.
15. (b) At the end of the passage it has been clearly stated that availability of cash was crucial for entering this industry.

Data Application

1. (b) 2. (c) 3. (d) 4. (e) 5. (d) 6. (c)
7. (e)

Passage II

Data Evaluation

1. (b) 2. (a) 3. (d) 4. (c) 5. (c) 6. (c)
7. (c) 8. (b) 9. (e) 10. (c) 11. (c) 12. (c)
13. (b) 14. (c) 15. (c) 16. (d) 17. (e)

Explanation: Given below is a broad framework of analysis, the understanding of which will enable you to understand the individual answers.

In a negotiation such as this both the negotiators come with some price in their mind. Mr Anderson will have decided that he must get a minimum of various things in the deal. Mr Aditya on the other hand will have decided the upper limit that he can go to in terms of the price he is willing to pay for the technology. The exact nature of this maximum and minimum limits would be the major factors that would influence the negotiation.

But once the negotiation starts, then the exact price that is decided upon (or not decided upon) would depend upon the negotiation abilities of each of the negotiators (Statement No. 13), which would again be a major factor.

All the factors which go to influence the above two major factors would be the minor factors. For example, statement nos. 5, 6, 7, 10, 11 and 15 all influence the former set of major factors and are hence minor factors. Whereas statement nos. 12 and 14 influence the latter set of major factors and hence are also minor factors.

In this passage the distinction between the major and minor factors is of crucial importance. The major objectives, major assumptions and unimportant issues are not difficult to determine because there are explicit statements in the passage which help in their identification. Hence, these need not be explained.

Data Application

1. (a) 2. (e) 3. (e) 4. (a) 5. (d)

Data Interpretation Tests

- I 1. (b) 2. (c) 3. (a) 4. (c) 5. (b) 6. (d)
- II 1. (b) $400 + 350 + 300 + 300 = 1,350$ represents total power used which includes both outside supplies (ex Electricity Board) and own generation.
2. (c) Power used - power received ex Electricity Board = own generation (to meet the shortfall). Hence $1,350 - 1,050 = 300$.
3. (d) Total power used = 1,350 KWH
Total power received ex Electricity Board = 1,050
Own generation = $1,350 - 1,050 = 300$ KWH
Cost of outside power $1,050 \times \text{Rs } 0.50 = 525$ (a)
Cost of own generation $300 \times \text{Rs } 0.75 = 225$ (b)
Total cost of power used = a + b i.e. $525 + 225 = \text{Rs } 750$
4. (c) Power used January/August = 3,100 KWH (a)
Power available ex Electricity Board during the above period = 2,500 KWH (b) Own generation to make up shortfall = $a - b = 3,100 - 2,500 = 600$
In May 50 KWH was surplus and used in June. Hence 100 KWH to be reduced from the difference between power actually used and the power which was available ex Electricity Board.
5. (c) Total power used = 5,100 KWH, out of this 4,350 KWH was supplied by Electricity Board @ Rs 0.50/KWH = Rs 2,175.
The shortfall of 750 KWH ($5,100 - 4,350 = 750$) was made up by own generation @ Rs 0.75/KWH = Rs 562.50
Hence Rs 2,175 + Rs 562.50 = Rs $\frac{2,737.50}{12}$
Rs 228.125/month avg.
6. (b) Only in July/August 150 units each were less received than demand, necessitating more own generation to meet the shortfall.
7. (a) Total power used in the first six months = 2,050 KWH
Total power received ex Electricity Board during the above period = 1,750 KWH
Difference ... 300 KWH
8. (c) Total power consumed in the last six months = 3,050 KWH. Total power consumed in the first six months = 2,050 KWH
Therefore % increase = $\frac{3,050 - 2,050}{2,050} \times 100 = 49\%$
- III 1. (c) There must be a total of 100% in a circle graph. The sum of other sectors is $49\% + 39.5\% + 11\% = 99.5\%$.
Therefore D = $100\% - 99.5\% = 0.5\%$
1. (b) 0.5% of Rs 128.3 lakhs = Rs 0.6 lakh
2. (c) Packing material = 39.5% of Rs $\frac{128.3 \times 39.5}{100} = 50.7$
Raw material = 49% of Rs $\frac{128.3 \times 49}{100} = 62.6$
 $50.7 \text{ lakhs} + 62.6 \text{ lakhs} = 113.6$
3. (d) Packing material represents 39.5% of the total cost of production. Hence 39.5% of Rs 128.3 = 50.7 lakhs
4. (b) Doubling a sum implies $\times 2$. D represents 0.5% of the total cost of production. Hence 0.5% of Rs 256.6 = $\frac{256.6 \times 0.5}{100} = 1.28$ or say 1.3%
- *Double cost (Rs $128.3 \times 2 = 256.6$)
5. (b) Four times increase = $\times 4$. Hence Rs $50.7 \times 4 = \text{Rs } 202.8$. Therefore total cost of production = $(128.3 - 50.7) + 202.8 = 278.4$
6. (b) Five times increase 400% increase. (100 is already included in it which has not to be added.)

7. (c) Four times increase implies 300%
8. (d) Actual increase is of 2%. Total cost of production is Rs 128.3 lakhs out of which total cost of packing material is 39.5% which works out to Rs 50.7 lakhs. 2% increase on packing material cost is = 1.01 lakhs
9. (c) When the raw material costs increase by 20.4%, the total cost of production increases by $\frac{49 \times 20.4 \times 100}{100 \times 100} = 10\%$. Therefore, the changed % share of raw material cost should be $\frac{49 + 10}{100 + 10} = 53.7\%$
10. (c) % increase in total cost = $\frac{147.5 - 128.3}{128.3} \times 100 = 15\%$
This increase comes from an increase in fixed manufacturing expenses. Therefore the % increase in fixed manufacturing expenses = $\frac{15 \times 100}{11} = 136.3\%$
- IV 1. (a) The areas under the three curves from origin to X_1 , give the profit figures for the respective competitors. Obviously till X_1 , the area under curve A is the maximum.
2. (c) The total area under the curve B for this range, 125 -- 200 lakhs = 8 cells = $8 \times 0.05 \times 25 = 10$ lakhs = additional profit gains. Hence the net profit realised = $10 - 5 = 5$ lakhs.
3. (b) These market shares imply sales of 50, 100, 150 lakhs for A, B, C. 8.33% market share would mean a movement of 25 lakhs or equivalently one cell of the graph. Increase in sales by 25 lakhs for C would mean a profit figure = area under the curve C from 150 to 175 = $5\frac{1}{2}$ cells. Similarly decline in sales by an equivalent amount for A would mean a loss = $4\frac{1}{2}$ cells. If C compensates A for this loss, the net gain for C = $5\frac{1}{2} - 4\frac{1}{2} = 1$ cell = $0.05 \times 25 = 1.25$ lakhs.
4. (d) Similar to question 3 (C's gain = $5\frac{1}{2}$; B's loss = $2\frac{1}{2}$. Difference = 2.625 cells = 3.26 lakhs.)
5. (c) B's loss in this case would increase by four cells = $4 \times 1.25 = 5$ lakhs. (4 cells = 20% in height on the graph). If C compensates B for his losses, C's net loss = $3.28 - 5 = -1.62$ lakhs.
6. (c) Compose the areas under A, B at 50 lakhs and 100 lakhs sales respectively.

Mental Ability Tests

1. (a) Count number of letters in each word and add one to get the number.
2. (c) Count number of letters in each word and double it, then add 2 to get the number.
3. (a) Count number of letters in each word and double the sum. Add 5 to get the answer.
4. (b) Give the letters their number in alphabet. Add them up to get the answer.
5. (a) -do-
6. (a) Give letters their serial number in the alphabet and add them up.
7. (a) -do-
8. (a) Give letters their serial number in alphabet. Add them up. Then calculate based on + or - sign.
9. (a) Letters stand for numbers. A = 4, B = 9, C = 1, D = 5, E = 2, F = 7, G = 6, H = 3, I = 8, etc.
10. (b) 11. (c) 12. (c) 13. (c) 14. (b) 15. (b)
16. (a) 17. (b) 18. (b)
19. (c) Take the number corresponding to those letters in the inverted alphabet, i.e. 22, 13, 8, 5. Each is derived from the preceding one by adding 4, 3, 2 and then 1 and halving ($22 + 4 = 26$; $26 + 2 = 13$; $13 + 1 = 7$; $7 + 2 = 3$). The third letter in the inverted alphabet is "X"
20. (b)

Test of Reasoning

1. (d) Ninth letter on the left of the ninth letter from the end means eighteenth letter from the end, or ninth letter from the beginning i.e. I.
2. (e) Cricket, hockey, football and volleyball are team games while tennis is played by two or four individuals.
3. (e) PNOENALA: NAPOLEAN: Name of an emperor
4. (e) YRGBU: RUGBY: Name of a game
5. (d) ULACIEBNPR: REPUBLICAN: Name of a political party
6. (d) MHREMOTRETE: THERMOMETER: An instrument used by doctors
7. (e) YILECCB: BICYCLE: Name of a vehicle
The other two words used are
YLAIRBR: LIBRARY
ELNBIR: BERLIN
8. (d) MASTER is written as PCVVHT
The code is that the first, third and fifth letters are replaced by the third alphabet on their right in the alphabetic series, while the second, fourth and sixth letter are replaced by the second alphabet on their right in the alphabetic series. This can be understood in the following manner
A, B, C, ..., M, N, O, P, Q, ..., X, Y, Z
As can be seen, P is the third alphabet on the right of M, while C is the second alphabet on the right of A. Similarly
S, T, U, V so S is replaced by V
T, U, V so T is replaced by V
E, F, G, H so E is replaced by H
R, S, T so R is replaced by T
Following the same procedure for the word PHILIP
P, Q, R, S P would be replaced by S
H, I, J H would be replaced by J
I, J, K, L I would be replaced by L
L, M, N L would be replaced by N
I, J, K, L I would be replaced by L
P, Q, R P would be replaced by R
Hence PHILIP would be written as SJNLRL
9. (d) $\{(257 \times 245) \div 4.288\} \times 295)^2 + ?$
is actually
 $\{(257 - 245) + 288\} - 295)^2$
 $= \{12 + 288\} - 295)^2 = (5)^2 = 25$
10. (d) The series is of the following form
ghi ijk klm mno opq
11. (c) The word BILLIARD can be divided into four parts.

BI	LL	IA	RD
1	2	3	4

This has been rewritten as

RD	IB	IA	LL
4	1	3	2

Similarly hockey can be divided as

HO	CK	EY
1	2	3

It would be coded as

EY	OH	CK
3	1	2

or EYOHCK
12. (b) All others are hunting and flesh-eating birds.
13. (d) $\frac{1}{3}$ rd of a rupee can get sugar = $\frac{2}{3}$ kg
One rupee can get sugar = $\frac{2}{3} \times 3 = 2$ kg
 $2\frac{1}{3}$ rupee ($\frac{7}{3}$ rupees) can get sugar = $\frac{2}{3} \times \frac{7}{3} = \frac{14}{9}$ kg
 $\frac{14}{9}$ is the same as $\frac{56}{12}$
14. (c) Interrupt means not to let someone speak. Hence it is opposite to speak. 'C' is the only pair having the two opposite

meaning words.

15. (d) CRICKET can be divided into its constituent letters as follows

C	R	I	C	K	E	T
-3	-2	-1	0	+1	+2	+3

It is written as

C	T	C	R	E	K	I
0	+3	-3	-2	+2	+1	-1

(i.e. starting from the middle letter then taking the letters from the extremes alternately)
Similarly RUMANIA can be divided as

R	U	M	A	N	I	A
-3	-2	-1	0	+1	+2	+3

This can be rearranged in the same manner as the word CRICKET was arranged i.e.

A	A	R	U	I	N	M
0	+3	-3	-2	+2	+1	-1
16. (d) We have to find the code for 'girl'. The only statement containing the word 'girl' is
'Sita is sweet girl', which is written as 'rye sue kim bis'.
If we can find the codes for 'Sita', 'is' and 'sweet' then the remaining word would be the code for 'girl'. So we consider the two statements containing 'is' i.e.
Sita is sweet girl : rye kim sue bis
Tea is hot : rye kora cho
We can see that the only word common on left hand side is 'is'. So 'is' is coded as 'rye'.
Now let us take the two statements containing 'Sita'
Sita is sweet girl : rye kim sue bis
Sita drinks tea : cho ber kim
Following the above logic 'Sita' is coded as 'kim'. Now let us take the statements containing 'sweet'
Sita is sweet girl : rye kim sue bis
Tea is sweet : sue cho rye
From these statements we can infer that 'is sweet' is written as 'sue rye'. We have seen above that 'is' is coded as 'rye'. This means 'sweet' is coded as 'sue'.
In the statement
'Sita is sweet girl' : rye kim sue bis
we know that 'Sita is sweet' would be written as 'rye kim sue'. Hence 'girl' is coded as 'bis'
17. (a) The above question can be solved by using three statements only viz
(i) Tea is sweet : sue cho rye
(ii) Sita drinks tea : cho ber kim
(iii) Sita is sweet girl : rye kim sue bis
From (i) and (iii) we can see that 'is sweet' is coded as 'rye sue'. From (ii) and (iii) 'Sita' is coded as 'kim'. Now we can easily infer in (iii) that 'girl' is coded as 'bis'
18. (c) The movement of Radha and the position of buildings is shown in the following diagram.
It is clear from the diagram that the yellow building is to the south-east of the green building.
19. (b)
20. (d) $(15 \div 3) \times 12 \div 6 \times (15 - 3) \times 12 + 6$
 $= 12 \times 12 \div 6 = 150$
 $(15 \div 3) \times 8 \div 6 \times (15 + 3) \times 8 + 6$
 $= 18 \times 8 \div 6 = 150$
 $(15 \div 3) \times 30 \div 6 \times (15 + 3) \times 30 = 5 \times 30 = 150$
21. (c) In a school one has to follow the discipline, in a society one has to conform to its norms
22. (d) The statements in the question can be rewritten as
(i) Mohini is elder to Madhu
(ii) Monalisa is elder to Mohini
(iii) Mona is elder to Monalisa
(iv) Monika is elder to Mona
(v) Monika is elder to Monalisa

Starting from statement (iv) we can say that Monika is elder to Mona is elder to Monalisa is elder to Mohini is elder to Madhu.

Thus we see that Monika is the eldest.

23. (a) As we can see above statement (v) is not required to answer the question.

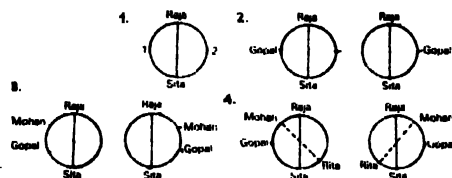
24. (d)

25. (b) My father's uncle is my grandfather's brother. His sister is my grandfather's sister also. Her brother is my grandfather. His son is my father. (Since my grandfather's brother never married so there is no question of his having a son).

26. (d) Raja is directly opposite to Sita can be shown as Mohan is in the exact middle of Raja and Gopal. So Gopal can be anywhere in the semi circle 1 or 2.

The position of Mohan is between Raja and Gopal, i.e., Rita is directly opposite to Mohan, so her position can be shown as

Thus we see that the position of Rita is between Raja



and Sita in both cases.

27. (e)

28. (d) My mother's sister's brother is my mother's brother i.e. my maternal uncle. His wife is my maternal aunt. Her son is my cousin.

29. (c) Fall causes pain, similarly disobedience causes punishment and swimming causes enjoyment. But enjoyment is a positive feeling while punishment and pain both are negative feelings so the correct answer is (c).

30. (a) BATRA can be divided into five parts as

B A T R A
2 4 5 3 1

This is rewritten as

A B R A T
1 2 3 4 5

Now each letter is replaced by its next letter in the alphabetic series, so we get

B C S B U

Similarly MAJESTIC can be divided into eight parts as

M A J E S T I C
2 4 6 8 7 5 3 1

This should be rewritten as

C M I A T J S E
1 2 3 4 5 6 7 8

Now each letter is replaced by its next letter in the alphabetic series to give D N J B U K T F

Quantitative Aptitude

BY KAVITA KAPOOR & B.L. ARORA

FOR PO, CAT, NDA & CDS EXAMS

This section has been specially designed for those appearing for PO, CAT, NDA and CDS exams.

DIRECTIONS: Tick mark the choice that best answers each question. Answers with explanations appear at the end of this test.

1. $\sqrt{8} + \sqrt{32} - \sqrt{50}$ is equal to

- (a) 2 (b) $\sqrt{2}$
(c) $2\sqrt{2}$ (d) $\sqrt{-10}$

2. $11\sqrt{-1}$ is equal to

- (a) 1 (b) $\sqrt{-1}$
(c) -1

(d) None of the above

3. If $4x^{0.5} + 20x^{0.25} + 25 = 0$, x will be

- (a) 625/16 (b) 5/2
(c) 25/4 (d) 25/8

4. The hypotenuse of a right-angle triangle is 8 cm long while the sum of the other two sides is 10 cm. The length of the longer side is

- (a) 6 cm (b) $3 + \sqrt{5}$ cm
(c) $5 + \sqrt{7}$ cm
(d) None of the above

5. The sum of the first 150 positive integers is

- (a) 11,325 (b) 22,590
(c) 10,675 (d) 16,540

6. If the largest number from the

digits 1, 3, 5, 6, 8, 0 and the smallest digit from these is added, the result will be more than their difference by

- (a) 13,568 (b) 21,576
(c) 27,136 (d) 32,408

7. If a number is subtracted from the square of its one-half, the result is 48. The square root of the number is

- (a) 8 (b) 6
(c) 5 (d) 4

8. What number must be added to the numerator and denominator of $3/4$ to give $11/12$?

- (a) 5 (b) 6
(c) 7 (d) 8

9. If the width of a rectangle is 2 m less than its length, and its perimeter is 32 m, the area of the rectangle is

- (a) 224 m^2 (b) 108 m^2
(c) 99 m^2 (d) 63 m^2

10. Four different bells ring at intervals of five, six, eight and 10 minutes respectively.

If they ring together at 4 p.m. they will next ring together at

- (a) 5.30 p.m. (b) 6.00 p.m.
(c) 7.00 p.m. (d) 8.10 p.m.

11. The smallest number which when divided by 6, 12 and 16 leaves 5 as remainder is

- (a) 43 (b) 53
(c) 59 (d) 65

12. The H.C.F. of the numbers 0.6, $6/25$ and $18/25$ is

- (a) $3/25$ (b) $3/125$
(c) $18/25$ (d) $18/125$

13. A company pays its employees twice their normal salary in June and December every year. The percentage of the annual salary the employees get in December is nearly

- (a) 8.33 (b) 14.3
(c) 16.66 (d) 18.27

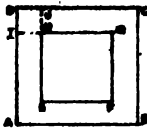
14. For a sphere of radius 10 cm, the numerical value of its surface area is—of the numerical value of its volume.

- (a) 22.66% (b) 26.5%
(c) 30% (d) 45%

15. A student passes an examination if he passes both in Maths as well as English. If 40% students fail in English and 50% fail in Maths, 40% students pass. The percentage of students who fail in English as well as Maths is

- (a) 10% (b) 30%
(c) 45%
(d) None of the above

16.



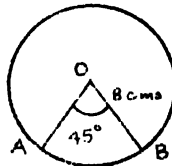
If the inner square in the figure is symmetrically placed inside the outer square, the area of the figure DIHJ is
(a) 4 sq cm (b) 8 sq cm
(c) 12 sq cm (d) 16 sq cm.

17. A man sells two horses for Rs 3,600 each, neither losing nor gaining in the deal. If he sold one horse at a gain of 20%, the other horse is sold at a loss of
(a) 12.6% (b) 14.28%
(c) 17.5% (d) 20%
18. Rakesh sold a machine at a loss of 15%. Had he sold it for Rs 500 more, he would have lost only 5%. The cost price of the machine is
(a) Rs 2,500 (b) Rs 3,750
(c) Rs 5,000 (d) Rs 5,450
19. Naresh buys 100 shares of face value of Rs 10 per share at the rate of Rs 15 per share. If the company declares dividend @ 20%, the interest he earns on his investment is
(a) 13.33% (b) 14.75%
(c) 18.25% (d) 20%
20. A shopkeeper sells vegetables at a profit of 10% and uses weights which are 10% less than the marked weight. The total gain he earns will be nearly
(a) 19% (b) 20%
(c) 20.86% (d) 22.22%
21. A person spends 30% of his income on house rent, 10% on income-tax, 15% on children's income, saves Rs 200 every month, and spends the balance on food and household items. If his saving is 5% of his income, how much does he spend on food and household?
(a) Rs 1,600 (b) Rs 1,650
(c) Rs 1,800 (d) 1,920
22. A man deposited Rs 7,500 in a company for two years and Rs 10,000 in another company for four years. The total interest he got from the two companies at the same rate of interest is Rs 8,800. The rate percent was
(a) 12.5% (b) 14%
(c) 14.75% (d) 16%
23. The simple interest at $x\%$ for x years will be x on a sum of
(a) x (b) 100 x

(c) $\frac{100}{x}$

(d) $\frac{100}{x^2}$

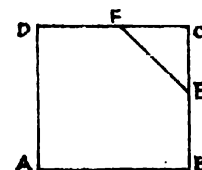
24. A sum of Rs 12,000 deposited at compound interest becomes double after five years. After 20 years it will become
(a) Rs 1,92,000 (b) Rs 96,000
(c) Rs 76,000 (d) Rs 48,000
25. The difference in compound interest and simple interest for two years on a sum of money is Rs 160. If the simple interest for two years is Rs 2,880, the rate percent is
(a) 15% (b) 12.5%
(c) 11.11% (d) 9%
26. The number of lines formed by joining six non-collinear points is
(a) 12 (b) 18
(c) 15 (d) 30
27. The measure of a reflex angle is
(a) between 90° and 180°
(b) greater than 90°
(c) between 180° and 360°
(d) greater than 360°



28. If the radius of the circle shown is 8 cm, the length of the arc, AB is nearly
(a) 1 cm (b) 3.142 cm
(c) 4.728 cm (d) 6.284 cm
29. Given x is inversely proportional to y and $y=8$ when $x=4$. If x is equal to 16, y will be equal to
(a) 2 (b) 32
(c) 20 (d) None of the above
30. When $x=4$, $y=64$ also y is proportional to x^2 . Therefore when $y=32$, x will be equal to
(a) 2 (b) $\sqrt{2}$
(c) $2\sqrt{2}$ (d) 4
31. The average earning of a labourer for the first four days of a week is Rs 18 and for the last four days is Rs 22. If he earns Rs 21 on the fourth day, his average earning for the whole week is nearly
(a) Rs 18.95 (b) Rs 19.65
(c) Rs 19.85 (d) Rs 20.70
32. The average age of four players is 18.5 years. If the age of the coach is also included, the average age increases by 20%. The age of the coach is closest to
(a) 28 years (b) 31 years

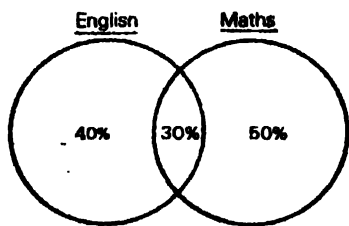
(c) 34 years (d) 37 years

33. A salesman sells goods worth Rs 27,000 in September increasing his average monthly sale for nine months by Rs 400. His average monthly sale for the first eight months is
(a) Rs 26,600 (b) Rs 25,300
(c) Rs 24,200 (d) Rs 23,400
34. The average age of four children in a family is 12 years. If the spacing between their age is four years, the age of the youngest child is
(a) 6 years (b) 7 years
(c) 8 years (d) 9 years
35. If five men or nine women can do a piece of work in 19 days, three men and six women will do the same work in
(a) 10 days (b) 12 days
(c) 14 days (d) 15 days
36. Four men can do a piece of work in seven days while it takes two men and three women to finish the same work in seven days. In how many days will two men and two women finish it?
(a) 8.2 days (b) 8.4 days
(c) 8.8 days (d) 9.2 days
37. Three men and four boys do a piece of work in six days, while four men and four boys finish it in five days. Two men and four boys will finish it in
(a) 7 days (b) 7.2 days
(c) 7.5 days (d) 8 days
38. Ravi and Amzad invested Rs 7,000 and Rs 10,500 in a business. At the end of one year Ravi's share of profit was Rs 2,500. The total profit they earned was
(a) Rs 6,250 (b) Rs 5,750
(c) Rs 5,200 (d) Rs 3,750
39. Gurcharan Singh and Sundram start a business, their investments being in the ratio $1/3 : 2/5$. Sundram withdraws his money after 8 months. At the end of a year, they must divide the profit in the ratio
(a) 5:6 (b) 6:5
(c) 5:4 (d) 4:5
40. If 15 seconds: x hours = 3:40, x is equal to
(a) 3.33 (b) 1.18
(c) 0.18 (d) $1/18$



ANSWERS

1. (b) The given expression can be written as $2\sqrt{2} + 4\sqrt{2} - 5\sqrt{2} = \sqrt{2}$
2. (c)
3. (a) Let $x^{2y} = y$. Then the given expression becomes $4y^2 + 20y + 25 = 0$, or $(2y+5)^2 = 0$. Thus, $y = -5/2$ or $x = 625/16$
4. (c) If a and b are the two other sides, then $a+b=10$ and $a^2+b^2=8^2=64$, where we have used the Pythagorus theorem. Solving these two equations, we get $a-b=2\sqrt{7}$. Since $a+b=10$, this gives $a=5+\sqrt{7}$.
5. (a) The sum of the first n natural number is given by $S = n(n+1)/2$. Putting $n=150$, we get $S = 150 \times 151/2 = 11,325$.
6. (c) If a is the largest number and b is the smallest number, $(a+b) - (a-b) = 2b = 2(13,568) = 27,136$.
7. (d) Let x be the given number. Then $x^2/4 - x = 48$, or $x^2 - 4x - 192 = 0$, which gives $x = 16$ or $\sqrt{x} = 4$.
8. (d) If y is the desired number, then we must have $\frac{3+y}{4+y} = 11/12$ or $36+12y = 44+11y$. Hence $y=8$.
9. (d) If L and W denote the length and width of the rectangle, $L-W=2$ and $2(L+W)=32$, i.e. $L+W=16$. Thus $L=9$ and $W=7$. Hence area $= 9 \times 7 \text{ m}^2 = 63 \text{ m}^2$.
10. (b) The bells would ring simultaneously at an interval which is the L.C.M. of 5, 6, 8 and 10. The L.C.M. of these numbers is 120. Thus they will toll together after 120 minutes or two hours.
11. (b) The L.C.M. of 6, 12 and 16 is 48. The required number is thus $48 + 5 = 53$.
12. (a) The given fractions can be written as $6/10$, $6/25$ and $18/25$. The H.C.F. of the given set of fractions = $\frac{\text{H.C.F. of numerator}}{\text{L.C.M. of denominator}} = \frac{6}{50} = \frac{3}{25}$.
13. (b) If the monthly salary is X , total annual salary $= 14X$. The percentage of salary paid in December $= \frac{2 \times X}{14X} \times 100 = 14.28\% = 14.3\%$.
14. (c) $\frac{\text{Area}}{\text{Volume}} \times 100 = \frac{4 \pi r^2}{\frac{4}{3} \pi r^3} \times 100 = \frac{3}{r} \times 100 = 30\%$.



15. (b) Given that 40% students pass or 60% of them fail. Representing the failed students with the help of a Venn diagram, it is obvious that 30% $(= (50+40-60)\%)$ of students fail in Maths, as well as English.

Thus 10% fail in English alone, 20% in Maths only and 30% in Maths, as well as English.

16. (d) Since the inner circle is placed symmetrically inside the outer circle, $DI = 4 \text{ cm} = JH$. Thus $DIHJ$ is a square of side 4 cm.
17. (b) Cost price of two horses = Rs 7,200, \therefore cost price of the horse sold at a gain of 20% = Rs $\frac{100}{120} \times 3,600 = \text{Rs } 3,000$.
Thus cost price of the other horse = Rs 7,200 - Rs 3,000 = Rs 4,200.
Loss % = $\frac{600}{4,200} \times 100 = 14.28\%$.
18. (c) Obviously Rs 500 is equal to 10% of the cost price of the machine. Thus, cost price = Rs 5,000.
19. (a) Money paid by him = Rs 1,500
Face value of shares = Rs 1,000
Dividend = 20% of Rs 1,000 = Rs 200
Interest % = $\frac{200}{1,500} \times 100 = 13.33\%$.
20. (d) If C is the C.P. of 1 kg he sells vegetables costing 0.9 C for 1.1 C . Thus percentage profit = $\frac{0.2}{0.9} \times 100 = \frac{200}{9}\% = 22.22\%$.
21. (a) The amount he spends on food and household items is 40% of his income. Since 5% is Rs 200, 40% will be Rs 1,600.
22. (d) Rs 7,500 deposited for two years would fetch the same interest as Rs 15,000 for one year.
Similarly Rs 10,000 for four years = Rs 40,000 for one year.
Thus on Rs 55,000, Rs 8,800 interest will be due after one year at a rate = $\frac{8,800 \times 100}{55,000 \times 1} = 16\%$.
23. (c) Since $I = \frac{PRT}{100}$,
 $P = \frac{100 I}{RT} = \frac{100 \times}{x \cdot x} = \frac{100}{x}$.
24. (a) $A = P \left(1 + \frac{R}{100}\right)^n$
Raising both sides to fourth power,
 $\frac{A}{P} = 2^4 = \left(1 + \frac{R}{100}\right)^n$. Thus $A = 16P$
 $= \text{Rs } 1,92,000$
25. (c) The simple interest (as well as the compound interest) for the first year is Rs 1,440. The extra compound interest for the second is due to the simple interest on this amount for one year. Thus, rate per cent is $\frac{100 \times 160}{1440} = 11.11\%$.
26. (c) The required number is the number of combinations of 6 things taken 2 at a time i.e. ${}^6C_2 = \frac{6 \times 5}{1 \times 2} = 15$
Alternately, each point can be joined to

five other points giving five lines. Since this can be done with each of the six points, the total number of lines so formed is $5 \times 6 = 30$. But in this process of counting, each line is counted twice. The net number of lines is therefore, $30/2 = 15$.

27. (c)

28. (d) Length of arc AB is equal to $2\pi \cdot \frac{45^\circ}{360} = \frac{2\pi}{8} = 2\pi$.

29. (a) Since x is inversely proportional to y , $x \propto \frac{1}{y}$ or $xy = \text{const.}$ $k = 4 \times 8 = 32$.

Thus, when $x = 16$, $y = 2$.

30. (c) Since $y \propto x^2$, we can write $y = kx^2$. Thus $k = \frac{y}{x^2} = \frac{64}{16} = 4$. When $y = 32$, $x^2 = \frac{y}{k} = \frac{32}{4} = 8$ or $x = 2\sqrt{2}$.

31. (c) Sum of the income for the first four days and that of last four days is $(18 \times 4) + (22 \times 4) = \text{Rs } 160$. In this, the income for the fourth day (Rs 21) is counted twice. Thus, income for seven days is Rs $(160 - 21) = \text{Rs } 139$. Average income = $\text{Rs } 139/7 = \text{Rs } 19.85$.

32. (d) Total age of players = $18.5 \times 4 = 74$ years. Average age of players and coach = $18.5 + 20\% \text{ of } 18.5 = 22.2$. Total age of players and coach = $22.2 \times 5 = 111.0$ years. \therefore age of coach = $(111 - 74)$ years = 37 years.

33. (d) Since the average increases in the ninth month by Rs 400, his sale in ninth month is Rs (400×9) more than the previous average sale. Thus, average sale for eight months is Rs $(27,000 - 3,600) = \text{Rs } 23,400$. Alternately, suppose the previous eight months average is x . Then $x + 400 = (8x + 27,000)/9 = \text{average for nine months}$.

Simplifying this, we get $x = 2,600$ or $x = \text{Rs } 23,400$.

34. (a) If x is the age of the youngest child, sum of their ages = $x + (x+4) + (x+8) + (x+12) = 4x + 24 = 12 \times 4$. Thus $4x = 24$ or $x = 6$.

35. (d) Since five men's work is equal to that of nine women, we can write $5m = 9w$ or $w = \frac{5}{9}m$. Thus 3 men and 6 women's work = $(3 + 6 \times \frac{5}{9})$ men's work = $\frac{14}{3}$ men's work. Since five men will do the work in 19 days, $\frac{14}{3}$ men will do it in $\frac{19 \times 5}{19/3}$ days = 15 days.

36. (b) One man's one day's job = $\frac{1}{12}$ and One woman's one day's job = $\frac{1}{18}$ ($\frac{1}{12} - \frac{1}{18}$) = $\frac{1}{36}$. \therefore Two men and two women's one day's job = $\frac{1}{12} + \frac{1}{18} = \frac{5}{36}$. Thus they will finish it in 8.4 days.

37. (c) Obviously one man's one day's job = $\frac{1}{12}$ - $\frac{1}{36} = \frac{1}{18}$. Thus two men and four boys' one day's job will be $\frac{1}{12} - \frac{1}{18} = \frac{1}{36} = \frac{1}{18}$. They will thus finish the job in $15/2$ or 7.5 days.

38. (a) Ravi's share: Total investment = Ravi's profit: Total profit or 7,000 : 17,500 = 2,500 : P or $P = \frac{17,500 \times 2,500}{7,000} = \text{Rs } 6,250$.

39. (c) Their investments are in the ratio $\frac{1}{5} : \frac{1}{6} = 6 : 5$. Their monthly investments are in the ratio $(12 \times 5) : (8 \times 6) = 60 : 48 = 5 : 4$. The profits should also be divided in this ratio.

40. (d) The given ratio is $\frac{15}{60 \times 60} \times \frac{1}{x} = \frac{3}{40}$ which gives $x = \frac{15 \times 40}{60 \times 60 \times 3} = \frac{1}{18}$

HOW TO TACKLE CAT-4

(Continued from page 45)

1. Line diagrams: In these graphs only one dimension - the length of the line is taken into account for the comparison of data. Only one item can be represented in a diagram (see Fig. 1).

2. Bar diagrams: The lines are made thicker in the form of bars. The breadth of all the bars is equal. The length varies according to the data represented by them. In these diagrams also one item can be represented (see Fig. 2).

3. Multiple bar diagrams: When more than one item is to be represented in a single graph, multiple bar diagrams are used (see Fig. 3).

4. Sub-divided bars: They also serve the purpose of multiple bars. In one bar two or more items can be represented. The bar is divided according to the number of items it represents (see Fig. 4).

5. Pie chart or circular diagrams: In this a sub-divided circle is used to repre-

sent the data. In pie charts, the degree of the angle for 1% will be $\frac{360}{100} = 3.6$.

The degree of the angle for each item can be determined by multiplying the given percentage with 3.6 (see Fig. 5).

6. Linear graph/curves: In this type of graph the data is shown through lines/curves. More than one item can be represented on the same graph by using different types of lines, e.g. dotted lines, single continuous lines, double lines, etc (see graph 6).

Hints

Note the following suggestions which will help you to solve the Data Interpretation section:

1. Have an over-all look at the graph and read the questions carefully. Make sure that you understand what you are being asked to do before you start computing.

2. Check the units (tonnes, kg, cases, number of persons, goods, etc). Ensure

that your answer is in hundred thousands, thousands, millions, lacs, etc whatever the question calls for.

3. Check the time unit. If the time unit of the variable under consideration is different from the time unit for the graph; then take care to adjust for the change suitably. Be sure that you are looking in the proper columns and on the proper lines for the information you need. Make use of a scale or a paper strip to read through the columns to avoid overlapping errors.

4. While working out percentages, make sure you find the base for comparison. Also remember that in order to convert a decimal into percentage, you must multiply it by 100, e.g. $0.06 = 6\%$. Distinguish between such quantities as 1%, 0.1%, 0.01% otherwise your calculations will go wrong.

5. In linear graphs, carefully note upward and downward trends and carefully compare them with the scale on the x and the y axis.

(Concluded)

NEWS CAPSULE

AWARDED

International Bar Association's Plaque of Honour to India's Chief Justice P.N. Bhagwati, for his dedicated efforts to promote an effective legal aid programme for the poor.

The gold medal for solidarity, instituted by the Afro-Asian People's Solidarity Organisation (AAPSO) to jailed South African black leader, Nelson Mandela.

Nobel Prize for peace (1985) to the International Physicians for the Prevention of Nuclear War, a politically independent group, informally known as doctors against nuclear war, for its "considerable service to mankind by spreading authoritative information and by creating an awareness of the catastrophic consequences of atomic warfare"; for Medicine to Americans Michael S. Brown and Joseph L. Goldstein "for their discoveries concerning the regulation of cholesterol metabolism"; for economics to Franco Modigliani of the Massachusetts Institute of Technology for "his analysis of savings and financial markets" for Physics to Klaus von Klitzing of West Germany's Max Planck Institute for Solid State Research for his discovery of the quantised Hall effect, which has "opened up a new research field of great importance and relevance"; for Chemistry to Herbert A. Hauptman and Jerome Karle of the US for their achievements which have permitted the development of "practical instruments for determining the structure of molecules within both inorganic and organic chemistry—not least within Chemistry of natural products" for Literature to French avant-garde novelist Claude Simon for successfully combining "the poet's and the painter's creativeness with a deepened awareness of time in the depiction of human condition."

SCIENCE

Reye's syndrome and aspirin: US researchers have released data showing a link between Reye's syndrome, a rare disease that affects children, and the use of aspirin during flu or chicken pox. Reye's syndrome typically occurs four to seven days after a child has flu or chicken pox. Rather than recovering, the child begins to vomit and becomes delirious and, in severe cases, lapses into a coma. A study by a government task force has concluded that if a child develops the disease, there is a 93% chance that he or she received salicylates, an aspirin ingredient. Children who take aspirin are 16 times more likely to get Reye's syndrome, says the study. Expectedly, the multi-billion-dollar aspirin industry rose up in arms against the study which they called a "total mismanagement of data and information." The industry has, however, agreed to place labels urging that physicians be consulted before aspirin is given to children with flu or chicken pox.

Galaxy by chance: A team of US astronomers has discovered by chance what might be the most distant galaxy ever seen from earth. The galaxy is 14.5b light years

away—2.3b light years further than the previous-most remote sighting. According to Prof Byron Spinrad of the University of Berkeley, his team discovered the galaxy by accident as it was testing a new combination of light filters. But one more year of work will be necessary to determine more details.

EDUCATION

The three Es: The pursuit of the three Es—equity, excellence and efficiency—has been recommended by a UNESCO-sponsored symposium for improvements in higher education. The three Es are inter-related and one will not be achieved with the isolation of the other two. The symposium, held in New Delhi, recommended a larger allocation of funds for the development of higher education and greater efficiency in utilising resources, the establishment of a data base in every institution and called for a "deliberate attempt to establish linkages between socio-economic and cultural development policies and plans and higher education." The symposium, attended by countries from Asia and the Pacific, is seen as important by the Indian Government because it is expected to give valuable feedback to its document "the challenge of education," which is the basis of the new education policy.

HEALTH

Victims of alcohol abuse: The number of people who die yearly from alcohol abuse is several million more than the victims of starvation in the Sahel region of northern Africa, the World Health Organisation (WHO) says in a report on alcohol abuse. Alcohol is the main cause of many physical and mental illnesses, the report says. It expresses concern about rising alcohol production, which rose by 50% between 1965 and 1980. Two-thirds of alcohol is produced in Europe and north America. But alcohol consumption is mostly on the increase in the developing world.

The National Health Education Programme has failed to educate people about protection against diseases like tuberculosis, cholera and typhoid. This is the finding of a study sponsored by the Indian Council of Medical Research (ICMR). Lack of credibility of government health programmes and the non-availability of doctors at the primary health centres (PHC) have resulted in the failure of the health education programme and under-utilisation of health services at the grassroot level. The study recommends a ban on private practice by PHC doctors and suitable compensation to them and urges the government to ensure adequate supply of medicine and immunising agents.

NEIGHBOURS

Pakistan and Zia: General Zia has been confirmed as Pakistan's President for another five years; the National Assembly, which confirmed the appointment, also agreed to validate his tenure of the last eight years. This was done on Zia's unwritten promise that he would lift martial law by the end of 1985. The

assembly also pardoned Zia's 1977 coup and validated almost all the martial law orders he has issued since then. But all this came about only because of a compromise that limited Zia's powers to dissolve the Assembly and dropped the government's demand that the Assembly may approve without consideration a draft law providing for the restoration of political parties.

Prior to this, Zia's proposal to create a national security council was dropped. The proposed 11-member council comprising the President, the PM and the Chairman of the joint chiefs of staff was supported by the armed forces. It was to advise the government in times of emergency and national crises. The proposal was dropped when many members of the 237-member national assembly opposed it.

In the meanwhile, Pakistan and China are about to embark on a new trade relationship, envisaging double the present trade volume between them. Two-way trade is proposed to be increased to 500m annually from the present 200m and the two neighbours are likely to collaborate in the energy sector. These were among the results of a trip to Beijing by Pakistan's Finance Minister, Mahboobul Haq recently.

Murder is now punishable by death in Nepal. The Rashtriya Panchayat has passed an amendment to the Civil Code Bill, providing for death penalty for "gruesome and senseless" murders. The proceedings of the Panchayat were not without hitch; Sri Bhadra Sharma, a leading member contended that the Bill was different from the one he had proposed and demanded its withdrawal. When it was not withdrawn Sharma walked out. PM Lokendra Bahadur Chand told the house the laws of Nepal provided for the death penalty and "there is no effort made to introduce a new law in this connection."

Bangladesh's nuclear plans: Canada has offered to sell a 600m nuclear power reactor to Bangladesh and is ready to build the country's first nuclear plant. The 300Mw reactor, ostensibly meant to generate electricity will be installed in remote Rooppur area, 25C km from Dhaka. Canada's offer was made public by Bangladesh atomic energy commission's chairman, Anwar Hossain, on his return home from a foreign tour. His mission: to search for a nuclear reactor supplier and aid for the project. To build the plant, for which Canada has offered financial aid, too, is no overnight job. It will take at least seven years.

ECONOMY—National

Economists express concern: The country's leading economists are concerned at the recent trends in the government's economic policies which, they think, will lead to accentuation of inequalities and unemployment and aggravate the foreign exchange position. A conference held in Calcutta concluded on Oct 12 with a joint statement that expressed the concern and the fear that the policies would take the country away from the accepted

PEOPLE

In this day and age, when people and places are continually grabbing news headlines, no knowledge, is adequate without a comfortable familiarity with these 'big' names. Here's a month-by-month coverage. In this issue, we cover October.

W. Buckley American embassy political officer at Beirut was kidnapped and executed by gunmen of the Islamic Jihad terrorist organisation

C. Cheysson: The EEC commissioner agreed with Indian officials to set up an EEC-India joint economic commission, during his stay here

B. Craxi The socialist PM of Italy resigned, when the Republican party withdrew support to his coalition government in the wake of the Achilles Lauro crisis

J.F. Dawkins: The Australian Trade Minister probed with Indian officials ways to expand and diversify bilateral trade relations during his recent New Delhi visit

L. Faluvegi: The Hungarian deputy PM during his recent tour of India signed a comprehensive programme for bilateral cooperation

Arkady Kotkov: Soviet diplomat at Beirut was seized and later gunned down by terrorists

R.P. Lubbers: The PM of Netherlands held talks with Rajiv Gandhi during the latter's halt at the Hague

W. Martens: Led the Centre-Right Coalition Christian People's Party to victory in the recent Belgian general elections

A. Mandic: Became the second man on earth to receive a synthetic heart when surgeons at the Hershey Medical Centre (US) implanted a Penn State Heart in him

V. Prabhakaran: Led an Eelam National Liberation Front (ENLF) delegation to India for talks with Indian officials led by Foreign Secretary Romesh Bhandari

T.A. Rithauddeen: The Foreign Minister of Malaysia discussed with Indian officials at New Delhi ways to strengthen bilateral ties and to peacefully defuse the explosive problems in South East Asia

Swaran Singh: Elected member of UNESCO'S Executive Board the organisation's second most powerful body

F.D. Sommers: Head of the International Physicians for the Prevention of Nuclear war—the organisation which received this year's Nobel Prize for Peace

J.C. Whitehead: US Deputy Secretary of State discussed wide ranging bilateral and global issues with senior Indian officials during his recent stay at New Delhi

Wu Xueqian: Chinese Foreign Minister expressed hopes of an early settlement of the border issue with India following his talks with External Affairs Minister B R Bhagat

S.R

national objective of growth with equality and self-reliance. The change in the Centre's economic policies is manifest in the relaxation of industrial licensing, raising MRTP limits, import-liberalisation, reduction in direct taxes on corporate and personal incomes and wealth

The economists' felt that the policies would together benefit only the rich. Organised by the West Bengal planning board, the 3-day conference was attended by 28 leading economists.

New high-level economic committee: A high-level inter-ministerial committee headed by Union Finance Secretary, S Venkatarmanan, has been set up to evolve a mechanism for implementing the recommendations of the Abid Hussain committee on trade policies and the Narasimhan committee on economic policy. The 10-member committee is also expected to evolve a machinery for rationalising the tax structure and the import licensing policy. The setting up of the new committee is seen by economy-watchers as indicative of the government's desire to shift as soon as possible from an era of quantitative restrictions on imports to one of financial controls as recommended by the Narasimhan committee.

Trade deficit doubled: The opening of the economy to imports has begun to be reflected in the country's trade deficit which has doubled in the first two years of the current financial year from the same period last year. According to Commerce Ministry data the trade deficit during April-May 1985 stood at Rs 1514.94 crores against Rs 779.52 crores during the same period in 1984. The imports at Rs 3083.17 crores were up by 39.1% and exports, at Rs 1568.23 crores by 9.1%. Unless exports go up substantially or imports are curbed during the rest of 1985-86, the year may end with a deficit of well over Rs 7000 crores against Rs 5187 crores last year. In tune with the larger imports, the country's foreign exchange reserves have also dwindled. During the first five months of the current financial year, the reserves declined by Rs 358 crores to Rs 6,459 crores.

Government expenditure, especially the non-plan expenditure is rising at a rate faster than the likely growth in revenue. This is despite the fact that revenue is likely to be much larger than estimated by the budget and profits of the public sector showing a rise, says the National Council for Applied Economic Research (NCAER) in its review of the economy. The review which covered the quarter April-June said the economy presented a mixed picture with a lower-than-targeted production of raw food, a slowdown in industrial output and decline in the foreign exchange reserves. The price rise was lower than in the corresponding quarters of 1983 and 1984 and exports improved. The council said the decline in food production was minimal but added that the 160m tonne target for 1985-86 "appeared ambitious". Infrastructure industries showed a fall in aggregate growth rate but their impact on overall industrial growth was negligible, it said.

ECONOMY—International

Deep depression seen? Commonwealth ministers of finance have warned of "deep depression in the world economy because of the increasing protectionist pressures and the trend towards bilateralism. The warning is contained in a communique issued at the end of a two-day meeting of the ministers in Male,

PLACES

Angola: More than 50 people were killed here when South African fighter planes strafed its south eastern regions.

Alexandria: Palestinian guerrillas hijacked an Italian luxury liner Achille Lauro on the Mediterranean off this Egyptian port city.

Berlin: An art exhibition at the Dresden Art Collection here will display rare Indian decorative art.

Brussels: The capital of Belgium brought together the British Defence Secretary Michael Heseltine and American counterpart Casper Weinberger, who agreed to maximise British involvement in Reagan's SDI project.

Kalpakkam: India's first Fast Breeder Reactor went critical at this town near Madras.

Luzon: A deadly typhoon lashed this northern island of Philippines killing more than 50 people and rendering 125,000 homeless.

Male: Capital of Maldives was venue of two-day Commonwealth Finance Ministers' meet.

Nassau: Capital of Bahamas hosted the 46th nation Commonwealth Heads of Government Meeting (CHOGM).

Ottawa: Canadian capital will stage the next CHOGM.

Rabat: Indian embassy at the capital of Morocco wound up after Morocco decided to sever diplomatic ties with India.

Reunion Islands: India opened a consulate at this French overseas territory near Madagascar on the Indian ocean.

SADR: The Saharawi Arab Democratic Republic, a West Saharan state, was recently recognised by India, provoking Morocco to snap diplomatic relations with India.

Seoul: Capital of South Korea was the stage of the 42nd annual meeting of the World Bank and the International Monetary Fund.

Sofia: Bulgarian capital held the 23rd general conference of the UNESCO.

Textile: In Liverpool (UK) was the scene of renewed racial violence in Britain.

Tunis: PLO headquarters located at the capital of Tunisia were bombed out by Israeli F-15 Phantom fighters Oct 1. S.R

Maldives held just a week prior to the MF-World Bank joint session in Seoul. South Korea Described officially as very successfully organised, constructive and positive, the meeting stressed the importance of progress on outstanding issues of the General Agreement on Tariffs and Trade (GATT). The issues include safeguards, non-tariff barriers, agriculture and textiles. Unlike previous meetings, the Male conference found the rich nations agreeing with the poor ones that the world economy was deteriorating and its impact on developing nations would be adverse.

Drop in World Bank aid for India: India's share of World Bank aid this year has dropped to \$2,346m from \$2,722m last year. Central America is getting the larger share \$3.7b compared to just over three billion last year. The breakdown was distributed at the bank's annual meeting with the IMF in Seoul.

Oil solidarity: Agreements. Petroleum products will be sold to any member of the

Gulf Cooperation Council (GCC) whose oil installations or outlets for export are cut off under an "oil solidarity" agreement reached recently. The agreement complements a 1984 plan under which the six-member alliance would pool crude oil stocks in the event of emergencies. The latest pact would help cover not only domestic needs but also export commitments. The GCC groups are Saudi Arabia, Kuwait, Qatar, United Arab Emirates, Bahrain and Oman.

STATES

The first crack in the G.M. Shah Government of Jammu and Kashmir appeared recently with Deputy Speaker, Malik Ghulam-ud-Din, quitting the ruling faction and rejoining the fold of former G.M. Farooq Abdullah. The strength of the Farooq faction in the state assembly is now 33, while the ruling National Conference (Khaleda) has 42 members. Ghulam-ud-Din cited increasing secessionist activities, curtailment of civil liberties, mounting corruption and the government's failure on the economic front as the reasons for switching back to the Farooq fold. Khaleda Shah, the President of the NC(K), welcomed Ghulam-ud-Din's departure and described the deputy speaker as an opportunist.

Traditional fishermen in Kerala: The Kerala Government has launched a major fisheries development scheme designed to augment production and consequently the income of the traditional fishermen, who number 180,000. The scheme marks a radical policy change inasmuch as the stress is now on the traditional fishermen, whose lot is sought to be improved through a multi-pronged strategy of modernisation of boats, supply of improved nets, modern beach landing craft and research and development support for technology. The National Cooperative Development Corporation has approved in principle a Rs 82-crore action plan for 1985-90 and has sanctioned Rs 5.6 crores for the first phase of the project, which will involve the development of 15 villages in Trivandrum, Ernakulam and Cannanore districts.

Increased allocations for Krishna: The second phase of the upper Krishna project in Karnataka will be allocated Rs 400 crores in the Seventh Plan instead of Rs 210 crores as envisaged earlier. This is to ensure the continuity of the assistance from the World Bank and also to accomplish quick results. The state government has sought Rs 500 crores from the bank but will have to spend the money before availing benefits from the funding agency. Says Finance Minister, H.D. Gowda: "In spite of financial constraints we have to necessarily concentrate on the upper Krishna project as it will irrigate 10.5 lakh acres at the end of the third phase in a perpetually drought-affected region." The second phase will irrigate three lakh acres by 1991.

A plan to pool resources to combat terrorism was the main outcome of the north zone conference of chief ministers of Haryana, HP, Jammu and Kashmir, Punjab and Rajasthan held in Manali, HP, recently. Other tangible results included consensus on the need to evolve a uniform tax system for the zone to avoid loss of revenue to any of them. The CMs also agreed to seriously look into the reports of anti-national and anti-social

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elements carrying on objectionable activities under cover of running minority educational institutions.

Ban on Manipur terrorists extended: The ban on secessionist and insurgent organisations in Manipur has been extended by another two years to counter the possibility of their regrouping. The groups declared unlawful are the People's Liberation Army, the People's Revolutionary Party of Kangleipak, offshoots of PREPAK and its armed wing, the red army.

EVENTS—National

Recommendations of health care committee: The Health Ministry and the Directorate-general of Health Services (DGHS) should be merged and DGHS doctors should be permitted to engage in private practice. These are among the important recommendations of a committee of experts set up by the PM. The committee, in its report to Rajiv Gandhi, said work was suffering due to the time-consuming and retarding duplication of work between the ministry and the DGHS and health programmes were suffering in the process. The merger or abolition of one of them would remove the anomaly and allow the health services to function smoothly. DGHS doctors, the seven-page report pointed out, were not given incentives and barred from private practice where their counterparts in other health services were, and urged the PM to make the system uniform. The committee was set up with the objective of going into the problems of health care facilities in the country and recommend measures for rectifying them.

Cleansing the Ganga: The Central Ganga Authority has approved a Rs 292-crore project to clean up the Ganga; of this, Rs 240 crores will be spent during the Seventh Plan. A special action programme for Varanasi prepared by the project directorate in consultation with the UP government has also been approved as part of the works programme. At the authority's first meeting in New Delhi on Oct 7, Union Minister of State for Planning, Aji Panja, suggested that state governments submit feasibility reports on all pending schemes by December-end. The suggestion was accepted.

Lesson of Bhopal: The Bhopal gas tragedy has not been forgotten, acting on its lesson, the centre has now appointed an inter-ministerial working group to review the measures for control of hazards in chemical, fertiliser and pharmaceutical units. The group, headed by the Secretary, Ministry of Chemicals and Fertilisers, will suggest standards to be incorporated into the industrial licences for units based on hazardous processes. It is also being examined whether any fresh legal provision will be necessary to promote safety in the chemical industry. A team of experts is being constituted to conduct a survey and inspect selected chemical units in metropolitan areas.

Devasthali convention: The Janata Party wants the government to adopt a bolder nuclear policy. This was one of the important points of a political resolution adopted at the Janata's annual convention in Devasthali, UP. The party resolved to launch a nationwide campaign for right to employment to be made

a fundamental right, larger plan allocation for rural development, implementation of the Mandal Commission's report and remunerative prices for agricultural produce. The slogan of the convention was: "Freedom and bread for all."

India has entered a new era in atomic power generation with the commissioning of the 50 Mw fast breeder reactor at Kalpakkam in Tamil Nadu. India is now one of a select band of nations which have successfully tapped the fast breeder technology. The development means India is now in the second stage of its nuclear programme. The future of the 500 Mw prototype fast breeder reactor, now under development, depends on the efficient running of the Kalpakkam reactor. If the experiment proves successful, such reactors are expected to replace the present generation heavy water reactor. The Kalpakkam reactor is also the world's first to use plutonium-uranium-carbide as fuel. The use of the carbide fuel eliminates the need for enriched uranium whose supply is governed by international safeguards.

EVENTS—International

Blueprint for USSR's development: A new blueprint for development of the Soviet Union, reflecting Communist Party leader, Mikhail Gorbachev's emphasis on efficiency, has been unveiled. To replace the programme adopted in 1961 under Nikita Krushchev's leadership, the new plan will be formally adopted in February, 1986. The plan, a 109-page document, restates the Kremlin's position on issues of the world, including the demand that outer space be excluded from the arms race. Simultaneous dissolution of the Warsaw pact and NATO are proposed to "overcome the division of the world into military-political groupings." But the stress is on better economic performance through efficiency, discipline and broader use of technology.

DIED

Simone Signoret, 64, one of France's best known actresses and an Oscar winner, of a "long and painful" illness in Paris recently. Signoret was also an author of repute.

Charles F. Richter, 85, the pioneering seismologist who helped develop the Richter scale to measure the magnitude of earthquakes, after a long battle with heart disease in Pasadena on Oct 1.

Helen Macinnes, 77, whose spy novels sold millions of copies around the world and were translated into 22 languages, of heart attack in New York on Sept 30.

Abdus Sattar, 79, the only elected civilian President of Bangladesh, of kidney and heart complications in Dhaka on Oct 5.

Yul Brynner, 65, who made more than three dozen films including such highly popular ones as "The Ten Commandments" and "The Magnificent Seven," of cancer in New York on Oct 10. Brynner was most famous for his role of the bald autocratic monarch of Siam in the play "The King and I."

Orson Welles, 70, the burly "boy wonder" of Hollywood who began his career by making the classic "Citizen Kane" and was acknowledged to be one of the world's most gifted film-makers, of natural causes in Los Angeles on Oct 10.

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SPORTS

CHESS

THE TIMELESS CHALLENGE

BY JAI SINGH SHEKHAWAT

The world is a chessboard, chequered white and black, the colours showing the two conditions of life and death... the chessmen are men of this world who have a common birth but occupy different stations in life."

—*The Innocent Morality*

The game of chess originated 1,400 years ago in north-west India. Historians are unclear about the true origins of the game, but references in early Sanskrit literature speak of a popular diversion called 'Chaturanga' which is believed to be the forerunner of modern chess. Chaturanga means 'four arms' and was also the name used then for the Indian army, more specifically, the four components of the army, i.e., elephants, cavalry, infantry and chariots—Rooks, Knights, Pawns and Bishops respectively.

In 6 A.D., the game travelled to Persia and Arabia, reaching Europe in the same century with the tide of Arab invaders. It was introduced in England during the Norman conquest.

By the turn of this century, chess was well established, all over Europe and tournaments were commonplace. Though anything approaching a world championship was still a thing of the future, almost any tournament featuring the likes of Adolph Anderssen, William Steinitz, Howard Staunton or Paul Morphy was billed as the 'search for the greatest'. They were undoubtedly the most accomplished players of the day and Steinitz, after beating Anderssen 8-6 in a match, even acquired the habit of describing all his subsequent matches as 'matches for the championship'. However, he bolstered his claim with some superb performances over the next seven years and is now generally accepted as the first chess champion of the world. After Steinitz the somewhat dubious title of World Champion passed through the hands of Emmanuel Lasker, Jose Capablanca and the Russian-born Alexander Alkhine. Then in 1948, the hitherto dormant, Paris-based, Federation Internationale de Esches (FIDE) flexed its muscles and organised the first official World Championship. It was won by Mikhail Botvinnik followed by Vasily Smyslov and Keres, all from the USSR, and marked the beginning of the chess revolution in Russia. Since then, apart from the brief reigns of Dr Max Euwe and Robert 'Bobby' Fischer, not only the champion but every challenger has been from the Soviet Union.

The Russian interest in chess is quite remarkable. The Establishment encourages the game in every way and to be a chessmaster is to have a secure, distinguished career. The network of local and national tournaments includes a system of rating registered players in every age group. And in the belief that chess inculcates

an interest in general culture, it has been made part of the curriculum in many schools.

Players who now compete in international tournaments get a FIDE rating: this is a numerical assessment of their performance based on the size and strength of the tournament. Certain scores are rated International Master (IM) or Grandmaster (GM). performances. If a player achieves two or three such scores or norms (depending on the total number of games involved) he is awarded the International Master or Grandmaster title. Dibyendu Barua from India, became an IM after winning IM norms at the Lloyds Bank Tournament, London, in 1981 and 1982, and again at Bhilwara in 1983. The high point of his career was his sensational victory over Victor Korchnoi, twice runner-up at the World Championships. And V. Anand, at 14, is the youngest Asian to win an IM norm. Meanwhile, the women have not been idle; sisters Rohini and Jayshree Khadilkar have taken India to the top of the pool (after the fourth round) in the 1984 World Chess Olympiad, with upset victories over Canada and England.

The World Championship now takes place in a three-year cycle with the Inter-zonals in the first year, the Candidates in the second, the World Title Match and the Inter-zonals for the next cycle in the third. By current FIDE regulations, the world is divided into 10 geographical zones with one to four players from each zone—depending on its strength—qualifying for the inter-zonals. The top six join the losing finalist in the previous World Championship and the runner-up in the previous Candidates, to form an eight-player Candidates Tournament. The winner earns the right to challenge the World Champion and the final victor is the first player to win six games.

What makes a top class chess player? "Concentration, imagination and a strong memory", says Fischer. And, of course, the will to fight. When grandmasters lock horns across the board, they seem to be linked by imaginary strings humming with the kind of tension that would make an Ali vs Frazier bout look like a friendly chat. The chessboard becomes a mere instrument in that clash of wills, for each has exactly two bishops, two rooks and so on; to push, probe, manipulate and ferret out the labyrinthine continuations fermenting in the other's mind. Played at this level, the game involves not only the individual's intellect but his entire personality and an expert will always

The New Champ

Fourteen long months and 72 games later, Anatoly Karpov of USSR, world champion for 10 years, bowed out to compatriot Garry Kasparov who at 22, becomes the youngest-ever world champion. The scores finally—13-11

tailor his tactics to match his opponent's dislikes. When Karpov squared off against Korchnoi for the world title, he is believed to have analysed every game played by the latter over the last 40 years to get an idea of, among the other things, his response to psychological and time pressure.

People often wonder what grandmasters do to tone down between chess tournaments. The curious answer is that they play more chess; but these are no ordinary games. Take Blitz, for instance. Also known as 'Lightning Chess,' it requires each player to move immediately after his opponent. Moves follow instantaneously, and games of a minute or less are frequent. ('Rapid-Transit' chess is a simpler version where players are allowed five or ten seconds a move). In 'Simultaneous chess,' the player, necessarily a grand expert, takes on several opponents simultaneously. Stahlberg, the Swedish master, once handled 400 boards in this manner, finishing with the remarkable tally of 22 losses and 364 wins after 36 hours of uninterrupted play. Which brings us to the final form and one that is frequently considered the ultimate mindbender—Blindfold chess. Pause a moment and time yourself for this question—What is the colour of White's QB5 square? If you answered black you have just performed an extremely simple exercise in blindfold chess. A true exponent will possess an instantaneous recall of the colour of every square as well as the numerous legal positions of every piece; in other words, he can 'see' the board as if he were actually looking at it. In truth this exercise is so difficult that when Philidor played four simultaneous blindfold games, affidavits were drawn up attesting to the fact that the performance had really taken place.

Over the years Morphy, Paulsen and Teti raised that number to eight, 15 and 24. Then in 1947 the Argentinian grandmaster Miguel Najdorf set the chess world ablaze with a truly spectacular display—he played 45 simultaneous blindfold games, winning 39 and losing just 21. But—and now hold your breath—Najdorf's performance is not considered the last word in blindfold chess. The remarkable Dr Rueben Fine once played four simultaneous, rapid-transit games (at 10 seconds a move) and won every one of them!

An article on chess would be incomplete without some mention of the chess clock; the single most important difference between social and competitive chess. Originally there was no time limit and games dragged on interminably. Morphy (and the spectators) who watched the game on vertical display is said to have sat with tears of frustration and boredom running down his face as the hours passed and Paulsen showed no signs of moving. Then a time limit of 20 minutes per move was introduced, with a fine for exceeding it; this too was unsatisfactory as most moves needed much less and a few needed more. Finally the present system was adopted—a time limit for the total time taken over a series of moves. This was first effected through the use of an hour-glass in which sand flowed for each player only when it was his turn to move. In the 1980s it was replaced by the chess clock. This ingenious device actually has two clocks; when a player has moved he pushes a button stopping his clock and starting his opponent's. Some clocks are even equipped with little flags that drop as soon as time expires.

BACK TO PLAY

President of the Indian Hockey Federation (IHF), M.A.M. Ramaswamy and Secretary, K.L. Rassi, forcefully pleaded for the six suspended Indian hockey players at the recent meeting of the International Hockey Federation in Barcelona, Spain. Their cajoling had, at least, a partial effect.

Six Indian hockey players, Somayya, Tikken Singh, Hardeep Singh, Rajinder Singh, Romeo James and Merwyn Fernandez were suspended for a period of eight years, for attacking a Japanese umpire in the Asia Cup in Bangladesh in January this year. Seeking vociferous support from representative of some friendly countries, the severity of the ban was mitigated.

The council finally decided to lift the ban on right-half Somayya, inside-right Tikken Singh and centre-half Hardeep Singh. These three players were asked by the IHF to join the national camp at NIS Patiala. The suspension period of left-half Rajinder Singh, goalkeeper Romeo James and seasoned inside-right Merwyn Fernandez was reduced from eight to five years.

N.K.

IFA SHIELD

The 93rd IFA Shield, scheduled to begin from Nov 14, is among the trio of near century-old football tournaments in the country. The IFA Shield commenced in 1893, whereas the other two, the **Durand Cup** in Delhi and **Revers Cup** in Bombay commenced in 1888 and 1891 respectively.

The state football association of Bengal is known as the Indian Football Association (IFA), which since its inception, organised every year in Calcutta a major football tournament known as the IFA Shield. To provide competitive experience to the Indian club sides and British regimental and departmental sides in football-crazy Bengal was what prompted the commencement of this tournament.

A unique feature of the IFA Shield is that since British teams ceased participating (1947 onwards), the tournament has been won only once by a team from outside Calcutta. This victory was achieved by the Indian Culture League from Bombay in somewhat dubious circumstances. The Bombay side won the trophy, not on the field of play, but by lodging a protest against the eligibility of some players of East Bengal. The protest was upheld and East Bengal were relegated to the second spot. Otherwise Calcutta-based teams have always won the IFA Shield, with East Bengal having the most impressive record—winners 18 times and runners-up six times. East Bengal have also won the tournament thrice in a row from 1949-1951 and four times in a row from 1972-1976.

Arch-rivals Mohun Bagan were the first Indian team to win the IFA Shield. In a memorable encounter, watched by a huge crowd of over 1,00,000, Mohun Bagan beat East Yorkshire Regiment 2-1. They have also won the tournament on 15 occasions and been runners-up 10 times. Mohun Bagan's greatest achievement was finishing joint champions with USSR's leading club team Ararat Erevan in 1978. The match finished in a 2-2 draw, and so the trophy did not go out of Calcutta.

Previously the IFA Shield used to be held directly after league season in the summer months. This year it is being held from Nov 14 to Dec 15. The schedule has been shifted to accommodate foreign club teams. For the first time ever, the Argentinian Club, River Plate, Shakhter Club of USSR, as well as Uruguay's national 'B' team will be seen in action from the quarter-final league stage onwards. The fourth foreign team in action is popular Abhani Krira Chakra from Bangladesh. The 1985 IFA Shield may thus see a reversal in trends, as the trophy may be won by a team outside Calcutta, and is probably destined to go to Argentina, USSR or Uruguay. Another historic occasion in this year's IFA Shield is that from the quarter-final league stage onwards, all matches will be staged at the newly constructed Salt Lake Stadium, with a capacity of over 1,00,000.

To popularise football in Bengal, the preliminary round matches of the IFA Shield are held in the districts like Malda, Nodia, 24 Parganas and Krishnagar. Only the post quarter-final matches are held in Calcutta.

NOVY KAPADIA

DCM FOOTBALL TOURNAMENT

The DCM football tournament held annually in Delhi was started in 1945.

Initially it was confined to local teams and outfits from nearby states. Excellent management and enterprise contributed largely to its growing popularity and stature so that in the 1950s, this tournament became a full-fledged national competition attracting entries from many parts of India.

According to G.P. Sinha, organising secretary of the DCM football tournament, "The DCM football tournament is not a marketing gimmick as our main sales area is north India. The only minor publicity benefit for the company is the generous distribution of free passes to people it wants to oblige. The basic aim of the tournament is to earn goodwill and the desire to be associated with excellence by organising the best football tournament in the country."

The most comprehensive sponsorship is that of the DCM. Its annual budget for the prestigious tournament is nearly Rs 20 lakhs. Costs are high because DCM is the only tournament in the country with participation of foreign teams as a regular annual feature.

The DCM football tournament is a trend-setter in Indian football. Since 1968 foreign teams have been annually participating in the DCM. Ethiopian Airlines and Ceylon XI were the initial participants, followed by teams from USSR, Australia, West Germany, Iran, North and South Korea, Bangladesh, Thailand, China and Singapore. Lavish hospitality at five-star hotels for the foreign teams plus generous terms to the leading Indian teams, especially East Bengal and Mohammedan Sporting necessitates a huge expenditure budget.

East Bengal club from Calcutta have the best record, entering the final on 10 occasions and being winners seven times and runners-up thrice. Taj club Teheran are the only team to win the trophy three years in a row from 1969 to 1971. The Liaoning football team from China are holders beating Western Australia Soccer

Federation team 1-0 in the final last year.

The DCM football is above all noted for its pioneering ventures, introducing new teams from both India and abroad. It is the DCM tournament which brought Goa and Punjab on to the football map of India by giving exposure to teams from both these states. Above all they annually provide regular international competition to our leading club teams. For years the DCM football has been associated with the mellow and benign sun of October in Delhi. However, since 1984 the All India Football Federation (AIFF) have re-allocated dates and so the DCM is held in the winter months of November-December after the Durand tournament.

N.K.

NATIONAL GAMES

November, 19, 1985 will be an important day for Indian sport. The historic day, which is also late Mrs Indira Gandhi's birthday, will herald the revival of the National Games. The last such event was held more than a decade back, the exact dates of which even the organisers don't remember.

The National Games will be held from Nov 19 to 26 according to international standards, and specifications. More than 3,000 athletes are expected to participate in the Games which will have 25 disciplines: archery, athletics, badminton, basketball, boxing, cycling, equestrian, football, golf, gymnastics, handball, hockey (men's), hockey (women's), judo, rowing, shooting, swimming, table tennis, lawn tennis, volleyball, weightlifting, wrestling, yachting, kabaddi and kho-kho.

The Games are being organised on a big scale on the lines of the Ninth Asian Games held in 1982. There will be team events and open events according to respective disciplines. The Games will also serve as the basis for picking up players for training them for the 10th Asian Games to be held in Seoul next year. Though most of the top stars are expected to participate, there are apprehensions regarding the competitive quality of the National Games. For instance, Railways and Services will not be participating. The team events will be held from the semi-final stage onward.

The men's hockey participants will be Maharashtra, Punjab, UP and Andhra Pradesh. National champions Indian Airlines will not be there nor will the Services be there. The organisers have announced the Services and Airlines players will be accommodated in any of the four teams. But it is doubtful if such hotch-potch combinations will produce good fare since nothing will be at stake for the participants.

The Indian Olympic Association has chosen a mascot for the 26th National Games. It is the first time ever that a mascot has been chosen for them. The mascot, Raju, is a lion with folded hands and smiling face conveying the message: combination of strength and politeness. The mascot will be a permanent feature of all future Games.

The logo of the National Games is a tricolour background giving them a national colour. It has three chakras in the centre which indicates progress in Indian sport. The chakras have 26 spokes which symbolises 26 disciplines.

affiliated to the IOA. Below it are rings of the International Olympic Committee. The logo has got a motto: "Self-discipline giving strength and spirit."

VIJAY

THE WINNING ELEVEN

Indian cricket has come a long way since the days of Bombay Pentangular cricket in the '30s. The Board of Control for Cricket in India conducts tournaments and championships the whole year round. Currently, there are 11 tournaments conducted by the Board at various levels. There are tournaments for schools and colleges apart from the cricket for seniors.

Ranji Trophy: The symbol of supremacy. It was instituted in 1934-35 in memory of the legendary Maharaja Ranjitsinhji, who played Test cricket for England. It is played among the states with the inter-state matches being of three days' duration, the quarter-finals and semi-finals of four days and the final of five. League at the zonal level and knockout in the quarter-finals.

Duleep Trophy: Instituted in 1961-62. It is played among the five zones—north, west, east, south and central. Apart from the final, which is a five-day affair, the other matches are of four days' duration. Knockout basis. Named after Duleepsinhji, nephew of Ranji.

Irani Cup: Being held since 1959-60. It is played annually between the Ranji Trophy winners and the Rest of India team. It is associated with the name of Z.R. Irani, treasurer of the board for more than three decades and president from 1966 to 1969.

Deodhar Trophy: Limited-overs competition started by the board in 1973-74 and named after Prof D.B. Deodhar, the grand man of Indian cricket from Pune. Contested by the five zones.

Wills Trophy: Limited-overs tournament contested by seven teams. Five teams, who qualify automatically are the winners from each zone of the Zonal Ranji Trophy League. The other two teams are Board President's XI and Wills XI.

Rohinton Baria Trophy: Inter-University Tournament instituted in 1935. Played at the zonal level first and later knockout basis among the qualifiers from each zone.

Vizy Trophy: Started in 1966-67. Played among the five zones with teams comprising the top university players selected after the Rohinton Baria. It can be called the Duleep Trophy of university cricket.

C.K. Nayudu Trophy: For cricketers under 22. Played at the inter-state and inter-zone level.

Vijay Hazare Trophy: Limited-overs tournament for under-22 players, introduced by the board last year. Named after one of the greatest batsmen produced by India. Played at the inter-zonal level.

Vijay Merchant Trophy: Competition for under-15 and played at the inter-state and inter-zonal level.

Cooch-Bihar Trophy: The best competition for school cricketers in India. Meant for cricketers under 19 years of age. Instituted in 1945-46, it is played at the inter-state and inter-zonal level.

V.L.

AROUND THE TRACKIN 30 DAYS

Athletics

The Fourth World Cup for Track and Field was held at Canberra, Australia from Oct 4 to 6. More than 400 of the world's top athletes representing Europe, Africa, Asia, the Americas (Canada, the Caribbean, South America) and Oceania (Australia, New Zealand and Pacific Islands), along with the US, and two national teams who came first and second in the Europa Cup (GDR and USSR) participated.

Though the US was poorly represented at Canberra, in the sense that not a single Olympic (1984) gold medal winner was present, their depth of talent may be judged from the fact that despite this setback the US still won the men's section.

The highlight of the meet was of course the two world records created by the East German women—Marita Koch set a new standard at **47.60 sec** for the **400m** and their sprint relay quartet of Silke Gladisch, Sabine Rieger, Ingrid Auerswald and Marlies Goehr established the new record of **41.37 sec** in the **4 X 100m relay**. Marita emerged as the top medal winner with three golds.

Results:

Men: 100m: Ben Johnson (Americas) 10.00; **200m:** Robson Caetano Da Silva (Americas) 20.44; **400m:** Michael Franks (USA) 44.47; **800m:** Samuel Koskei (Africa) 1:45.15; **1,500m:** Omar Khalifa (Africa) 3:41.16; **5,000m:** Douglas Padilla (USA) 14:04.11; **10,000m:** Wodajo Bulti (Africa) 29:22.96; **110m hurdles:** Anthony Campbell (USA) 13.35; **400m hurdles:** Andre Phillips (USA) 48.43; **3,000m steeplechase:** Julius Karuki (Africa) 8:39.51; **high jump:** Patrick Sjoeborg (Europe) 2.31m; **pole vault:** Sergei Bubka (URS) 5.85m; **long jump:** Mike Conley (USA) 8.20m; **triple jump:** Willie Banks (USA) 17.58m; **shot put:** Ulf Timmermann (GDR) 17.58m; **discus:** Georgy Kolnootchenko (URS) 69.08m; **hammer:** Yuri Tamrn (URS) 82.12m; **javelin:** Uwe Hohn (GDR) 96.96m; **4 X 100m relay:** USA 38.10; **4 X 400m relay:** USA 3:00.71.

Women: 100m: Marlies Goehr (GDR) 11.10; **200m:** Marita Koch (GDR) 21.91; **400m:** Marita Koch (GDR) 47.60 (WR); **800m:** Christine Wachtel (GDR) 2:01.57; **1,500m:** Hildegard Komer (GDR) 3:00.71; **5,000m:** Ulrike Bruns (GDR) 9:14.65; **10,000m:** Aurora Cunha (Europe) 32:07.50; **100m hurdles:** Cornelia Oschkenat (GDR) 12.72; **400m hurdles:** Sabine Busch (GDR) 54.45; **high jump:** Stefka Kostadinova (Europe) 2.00m; **long jump:** Heike Daute-Dreschler (GDR) 7.27m; **shot put:** Natalya Lisovskaya (URS) 20.69m; **discus:** Martina Opitz (GDR) 69.78m; **javelin:** Olga Gavrilova (URS) 66.80m; **4 X 100m relay:** East Germany (GDR) 41.37 (WR); **4 X 400m relay:** East Germany (GDR) 3:19.50.

RECORDS OF THE MONTH

Sofia Turosz of Poland set a world-best for the women's **50km walk** by recording a time of **5:13:49.8** on Oct 14 at the Warsaw stadium. The previous best was 5:29:03.0 by Anne Vandenhoff of USA, set in 1980.

Boxing

On Oct 9 at Bangkok, the WBC stripped Michael Spinks (USA) of his light heavyweight world title. In September, Spinks had become the only light heavyweight to win the world heavyweight title when he outpointed Larry Holmes (USA), holder of the IBF (International Boxing Federation) version of the heavyweight title. WBC rules do not permit a boxer to hold titles in more than one weight class.

Cricket

The national zonal championship for the **Duleep Trophy** was won by West Zone, as they outplayed defending champions South Zone by nine wickets in the final at Bangalore which finished on Oct 21. This was the 12th triumph for West Zone.

The five-day **Irani Trophy** between Bombay (winners of the **Duleep Trophy**) and the Rest of India ended in a draw at Nagpur on Oct 28. Bombay, by virtue of their first innings lead regained the trophy, and it was their 12th triumph.

Football

Madhyamgram High School from West Bengal won the **Subroto Mukherjee Cup** for schoolteams under 17 years, played at the Ambedkar Stadium in New Delhi on Oct 16. Thrice winners (1981, '82 and '83) Government School, Dimapur, 1-0; Madhyamgram is the only team to win four times outright—an all-time record.

Mohun Bagan won the 97th **Durand** football tournament beating JCT Mills Phagwara 3-2 via the tie-breaker in the final played before a capacity crowd at the Ambedkar Stadium, Delhi on Nov 2. The match ended goalless, even after 120 minutes of listless play, 90 minutes of regulation time and 30 minutes of extra-time. With this victory, Mohun Bagan have improved their impressive record in the Durand Cup—they have now won the cup 13 times, 11 times outright, twice joint-winners in 19 appearances in the final.

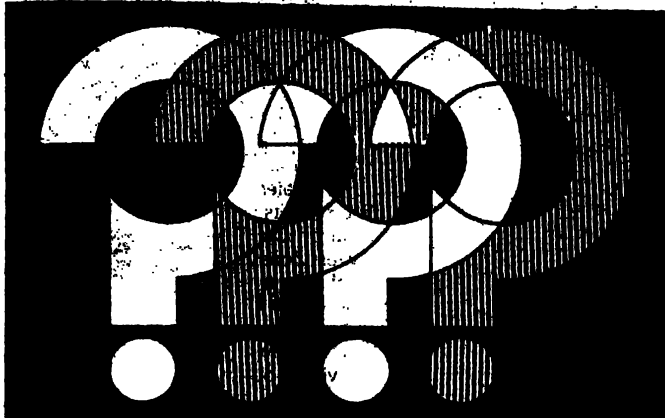
Hockey

At Barcelona, in the Intercontinental Cup Tournament, which forms the qualifying tournament for the World Cup, Spain defeated former Olympic Champions New Zealand 9-7 on penalties, after they were deadlocked at 2-2 after full-time. Third place went to Poland, with another victory on penalties over Canada, after their play-off also ended 2-2. These four teams, along with fifth placed Argentina qualified for next year's World Cup in London.

A four-nation tournament was held at Willesden, near London in which an experimental Indian squad was sent. The tournament was a disaster for India. Still reeling under the impact of having five players banned, the team proved woefully inadequate for international pressures. Holland emerged on top, with wins over second-placed Soviet Union (3-0), England (2-0) and bottom-placed India (1-0). The Indians also lost their other matches—2-0 to the Russians and 2-1 to England, managing to score only one goal.

SANJEEV GUPTA

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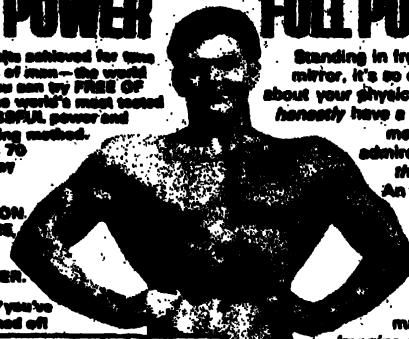
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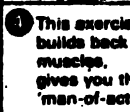
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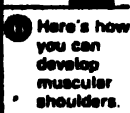
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CURRENT EVENTS: International (Continued from page 32)

government's prior concern will have to be the economy. Cavaco Silva's platform calls for a major economic overhaul, including a campaign to deprivatise selected state industries. He also intends to lower interest rates and slow the government's monthly devaluation of the escudo, the Portugal currency. Although this may help to reduce Portugal's 20% inflation rate, it could also adversely affect the balance of payments. What analysts also fear is that the minority government may not be too stable. It will be Portugal's 16th government in 11 years, and if a Eanes' backed candidate wins the next Presidential elections, he could dissolve the Parliament and call for fresh elections.

LIBERIA

BACK TO DOE

Gen Samuel Doe was elected the new President of Liberia, in elections held in mid-October, by winning a majority of 51% of the votes. Doe had first come to power in 1980, when some fellow soldiers of Doe, then a master-sergeant, killed President William Tolbert and toppled his government. He has ruled since then with a heavy hand. Wishing to give himself legitimacy he called for elections recently. However, although he lifted a ban on political activities 15 months ago, a military decree sanctioned the arrest of individuals who spread "disinformation" about the country's rulers, thus stifling debate. The Election Commission also banned some opposition parties because they followed "foreign ideologies." Even at the election some unfair practices were observed, but US and European diplomats who monitored selected voting stations in eight of Liberia's 13 counties, said that, for the most part, the elections were orderly. It is hoped that the national elections would be a stepping stone to the restoration of a civilian, parliamentary regime in the country.

Liberia, however, faces grave domestic problems. Since Doe came to power in 1980, slumping iron ore and rubber prices and mismanagement have doubled Liberia's foreign debt, which is now more than \$1b. Besides, unemployment is rampant, the figure for Monrovia itself being 60%. Further, thousands of government workers have not

been paid for months. Doe's new government, therefore, faces a major uphill task to pull the country out of the doldrums.

US-TURKEY

TERMS OF AGREEMENT

The existing defence and economic cooperation agreement between the US and Turkey is due to expire in December, and what Turkey now wants is a treaty rather than an agreement, a request which is sure to be turned down by the US Congress. As an alternative, Turgut Ozal's government in Turkey wants to renegotiate the entire agreement. Ozal feels that since Turkey provides the Americans with a large number of intelligence-gathering stations and air bases, the Americans should give more aid to the poorly equipped Turkish armed forces and to the struggling economy. Turkey ranks third, after Israel and Egypt, as a recipient of American monetary aid, getting \$785m worth military aid and \$150m worth economic support this year. What it now seeks is \$1.2b a year over the next five years. The Turks also feel that the amount earmarked for them has been whittled down by the US Congress over the last few administrations, and argue that a determined administration could withstand congressional resistance.

The Turks also complain about the seven to 10 military aid ratio to Greece and Turkey, which has been conventionally followed. Turkey's importance in the NATO is more than that of Greece and it feels that this ratio makes no sense. However, the Greek lobby in Congress is too strong to allow any change.

The Americans, too, wish to negotiate with Turkey on some points. They want it to give the Voice of America broadcasting facilities in Turkey as well as readier access to its ports for their warships and the complete use of the Incirlik air base in the case of a Middle Eastern emergency. They also want more active Turkish support for their plans to move their rapid deployment force quickly into the area in a crisis.

Analysts feel that a new agreement will be signed because the anti-American political left could otherwise take over power. However, Ozal is keeping his options open and to show that he is not a "running dog" of the Americans himself, he sent his Chief of the General Staff, Gen Urug, to Moscow, on Oct 11.

S.B.

NEWS IN BRIEF

(Continued from page 26)

in the Middle East. In Amman, the Palestine Liberation Organisation's (PLO) Yasser Arafat and Jordan's King Hussein agreed on a "framework of common actions" reaching a settlement with Israel over the fate of 1.3m Palestinians in the Israeli occupied West Bank and Gaza Strip. In February, the Russians and the Americans discussed the Middle East in Vienna for the first time since 1977. President Hosni Mubarak of Egypt also tried to enlist the help of the US and Iraq.

In May, Israel and Lebanon completed a controversial and lopsided exchange of prisoners of war (POWs): 1,150 Palestinians and Lebanese (including terrorists) for three Israeli POWs.

The Israeli withdrawal, however, meant fresh trouble for Lebanon. The illusion of national unity vanished and Shia-Sunni trouble broke out almost immediately. Christians were also attacked by Druze and Muslims at villages near Sidon after Christian militiamen belonging to the Lebanese forces pulled out of the heights above Sidon. As faction fighting spread, a car bomb exploded in the densely populated Shiite Muslim suburb of Beirut, killing 75 people. The explosion occurred near the home of Sheikh Mohammad Hussein Fadallah, leader of the extremist Hizballah organisation, which had been trying to capture the leadership of the Lebanese Shias through a call for establishing an Islamic republic on the lines of Iran. The party had many enemies including the Christian Phalangist party and the secular Shiite Amal movement. In May a car bomb exploded in the

Christian sector of Beirut killing 55 people. Shiite militiamen also battled with Palestinians for control of three Palestinian refugee camps.

By early June there were signs of Syrian forces moving out to restore order. Trouble again broke out in August and 300 people died, nearly half of them victims of car bomb explosions. President Hafez Assad then tried to extend Syrian influence by calling a meeting of Lebanese Muslim leaders at Damascus. He drew up a 16 point plan, that was decried by the Lebanese Christians and new bickering again broke out between them and the Druze and Shiite Amal leaders and the car bomb warfare was renewed. PM Karami asked Syria to deploy its troops throughout Beirut thus letting Lebanon become more and more dependent on Syria.

Iran-Iraq

In March, the Iranians launched a fresh offensive that was quelled by Iraqi fire power. Later in the year Iran claimed that Iraqi missile attacks on 14 Iranian towns had left 78 dead and 326 injured. Iraq had also been continuously bombarding Teheran. The war, however, goes on.

DIED

Robert Fitzgerald, 74, poet, critic, translator and journalist, whose best known translations are of Homer's Iliad and Odyssey. He was named the Boylston Professor of Rhetoric and Oratory at Harvard in 1965.

Massahisa Takenaka, 51, Japan's reigning godfather since June 1984, when he became Chieftain of the 10,400 member Yamaguchi-gumi, the country's largest group

of yakuza (gangsters), of gunshot wounds.

Frank Oppenheimer, 72, physicist, who along with his brother, J. Robert Oppenheimer, did pioneering research on radiation and cosmic-rays and worked on the World War II Manhattan Project to produce the atom bomb.

James Hadley Chase, 78, popular British mystery writer, who wrote nearly 100 books of which 30 became films and plays on Feb 6, at his home at Corseause Sur-Vevay in Switzerland.

Henry Hathaway, 86, Hollywood director of more than 60 hit action-adventure movies including *The Lives of a Bengal Lancer*, *The Desert Fox* and *True Grit*.

Charles Shepard, 70, medical researcher who in 1960 first succeeded in growing the microbe that causes leprosy, in lab animals, a breakthrough leading to the development of preventive measures. He was also one of the two researchers, who in 1970 isolated the bacterium that causes *Legionaire's* disease.

Iosif Shklovskii, 68, Soviet astrophysicist and radio astronomer, who made basic discoveries about neutron stars, quasars and novae and also led the Soviet research on extra-terrestrial intelligence. His 1966 collaborative work with US Astronomer Carl Sagan, *Intelligent Life in the Universe*, is still among the basic books on the prospects for life beyond earth.

Patricia Robert Harris, 60, lawyer and educator, the first black American woman to hold a Cabinet post (President Carter's Secretary of Housing and Urban Development and then of Health, Education and Welfare) or serve as a US Ambassador (Ambassador to Luxembourg during President Johnson's time).

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CAREER NEWS

FCO Scholarships

Scholarships in the areas of business and management studies, defence/war/international studies, media/journalism/communications studies for practising journalists and lawyers are to be announced by the Ministry of Education and Culture, Government of India. The scholarships will be offered under the Foreign and Commonwealth Office (FCO) Scholarship and Awards Schemes, 1986/87. For further details please contact the External Scholarships Division, Shastri Bhavan, New Delhi.

LIC Agents

How would you like to go round insuring people's lives? Sounds both tough and exciting, doesn't it? The Life Insurance Corporation of India is looking for young men and women who are either matriculates or graduates to be trained as insurance agents. If you are prepared to put in some sincere hard work, visit or mail complete bio-data to the nearest career agent's branch of the Life Insurance Corporation of India. For details you may look up *Employment News*, dated Oct 26, 1985.

PO Exams

The Central Recruitment Board (State Bank Group) will hold written exams on Feb 16, 1986, to select 500 POs for

appointment in the State Bank of India. The last date for submitting applications is Dec 9, 1985. For application format and other details see *Navbharat Times*, dated Nov 7, 1985.

SC/ST Scholarships

A special ONGC scholarship scheme has been announced exclusively for SC/ST students pursuing full-time graduate engineering courses at the IITs or the Regional Engineering Colleges. The 25 scholarships, tenable from the second year of the engineering course will be awarded to selected students with performance levels of 6.5 or above grade point average out of ten or equivalent, in the first year alone.

SUCCESSFUL INDIAN OF '85

Readers, write in whom you think fills the above bill. Only:

■ The person must be an Indian citizen;

■ Must have achieved something in 1985 which has made every Indian proud;

■ Must have risen to the top.

Send in your nomination latest by December 30 on a postcard with your name, age and address. Also, indicate in four lines the reason for your nomination. The first 25 best nominations have an attractive but surprise gift waiting.

Send in your applications in accordance with the format and other details published in *The Statesman*, Oct 23, 1985, to reach the Deputy General Manager (Administrative), ONGC, Tel Bhawan, Dehra Dun, before Dec 23, 1985.

BSRB Central Group

The BSRB (Central Group), Lucknow, invites applications from Indian citizens for appointments in the Allahabad Bank. The written exam for POs will be held on Dec 29, 1985, and for Agriculture Field Officer Small-scale Industry Field Officer on Jan 12, 1986. The last date for submitting forms is Nov 21, 1985. For details see *Employment News* dated Nov 9, 1985.

Assignment Abroad

A wide range of opportunities have been thrown open by the Commonwealth Secretariat (Commonwealth Fund for Technical Co-operation) to suitable candidates who are interested in short or long-term assignments in the Commonwealth developing countries.

If you are a Commonwealth national, within the broad age-range 35 to 60 years and preferably with work experience in the developing countries, you may register your name with the Recruitment Section, Commonwealth Secretariat, Marlborough House, Pall Mall, London W1Y 5HX, 01-8393411, extn 8151.

For details see *The Economist*, Oct 19-25, 1985; or for a copy of the advertisement please send us postage stamps worth Re 1 along with a self-addressed stamped envelope.

Answers to

TEST YOUR WORD POWER

- abstain:** A: to hold away from; refrain. Younger women who smoke stand the same chance of getting uterine cancer as those who abstain.
- ale:** B: light-coloured beer. To concoct ales and lagers, brewers must orchestrate a series of chemical reactions in which yeast cells break down starches or sugars into ethanol and carbon dioxide.
- blitz:** C: a swift, sudden violent attack (specially from the air); an intensive non-military campaign. Billed simply as a "celebration" of Indian culture, the Festival of India is likely to be the most elaborate and far-reaching cultural blitz ever to hit the US.
- boisterous:** B: noisy; turbulent; violent; rough; wild; rowdy. The annual gatherings of Britain's Trades Union Congress are always boisterous affairs.
- cavity:** C: hollow; small hole within a solid body. Sugar interacts with bacteria in the mouth, producing acids that bore holes—cavities—in the teeth.
- chaos:** C: total disorder or confusion. Just months after the military coup that overthrew President Milton Obote, Uganda is grappling with new internal feuds and drifting once again toward chaos.
- counterfeit:** D: forged; false; sham; something made to resemble some genuine thing with the intent to deceive. The world's airlines have lost up to \$ 500m a year because of stolen, altered or counterfeit tickets.
- deport:** A: to expel or banish from a country, often for political reasons. According to the agreement reached between the Centre and Assam agitation leaders, none of the immigrants who arrived in Assam after 1966 will be permitted to vote for the next 10 years—and all immigrants who arrived after 1971 will be deported.
- elude:** A: to dodge; slip away from; avoid adroitly. Zbigniew Bujak, the 30-year-old leader of underground Solidarity, has managed to elude Polish authorities since late 1981.
- ferment:** A: to undergo chemical changes through the action of organic bodies. Commercial beer generally takes eight days to ferment and six weeks to mature.
- galvanize:** A: to shock or rouse. In his first 40 days as President of Peru, Alan Garcia Perez has not only imposed a series of stiff austerity measures, but has managed to galvanise popular support for them.
- mausoleum:** C: a large stately tomb. In 1980, Peking formally resurrected Genghis Khan to his lofty status of folk hero and put crews to work to restore his mausoleum.
- opulence:** C: wealth; luxuriance; affluence. The sinking of the Titanic on its maiden voyage, and the death of more than 1,500 of the 2,200 passengers on board, had signalled the end of the Edwardian era in all its cocky opulence.
- precarious:** B: uncertain; unsafe; depending upon chance. Third World debtors and Western lenders share a precarious and often stormy coexistence.
- revile:** A: to attack with contemptuous language, abuse. During the Cultural Revolution, Genghis Khan was officially reviled for the suffering he inflicted upon millions as his Mongol troops slaughtered and pillaged their way across Central Asia in the 13th century.
- soporific:** D: causing sleep. Despite its subtle elegance, world-championship chess ranks among the most soporific of all spectator sports.
- squabble:** B: petty or noisy quarrel, wrangle. Squabbles between France and the island nations of the Pacific are nothing new; but the Rainbow Warrior bombing, coming on the heels of the New Caledonia dispute, has stretched nerves taut.
- subside:** A: to go down slowly; become quieter after being violent; settle; descend. Since the debt crisis struck three years ago, tensions between lenders and borrowers have periodically flared and subsided.
- troupe:** D: company of performers. For the first time since the early 1960s, a Mongolian folk arts troupe will tour China and Inner Mongolia.
- tycoon:** D: wealthy and powerful businessman or industrialist. In the 1930s, ethnic Chinese tycoons in what are now Singapore and Malaysia provided considerable aid for the country's battle against Japan.

Vocabulary Ratings:

20-18 correct exceptional
17-15 correct excellent
14-12 correct good

PREPARING FOR THE PO EXAM

BY MRUGESH JANI

The Bank Probationary Officer's exams are on the anvil. A question by question analysis of how to go about preparing for the PO exams and the interview which follows, based on the author's experiences as a successful PO.

The bank Probationary Officer (PO) exam is essentially designed to test the candidate's overall intellectual capability and depth of understanding. The type of questions asked and the time available to answer them ensure that the candidate has a comparatively high level of quantitative aptitude, a good comprehension of the English language and a well organised and systematic power of expression.

The exam is conducted in two parts. The first part consists entirely of objective type questions divided into the following sections: (i) about 50 questions on quantitative aptitude to be attempted in about 30 minutes; (ii) about 100 questions on English comprehension (from passages), sentence completion, vocabulary, etc to be attempted in about 60 minutes, and (iii) about 50 questions on General Knowledge.

The second part of the written exam attempts to test the candidate's power of expression in the English language. It consists of an essay (compulsory) and a choice is offered between a letter and a precis.

Time Allotment

Usually the Banking Service Recruitment Boards and the SBI Board advertise in all major dailies about three to four months prior to the date of the exam. As such, the candidate has adequate time to prepare thoroughly for all the subjects. To ensure success, start preparing at least three months in advance.

A time table is a must to help you to avoid neglect of any subject as well as to assess your progress and achievement after you have gone through all the topics at least once. The best way to prepare systematically is to allot the time available—usually three months for four topics, viz.

- (1) Quantitative Aptitude; (2) English (Descriptive); (3) General knowledge; and (4) English (Objective). But one must be

cautious enough not to neglect any topic, even though he or she may be good at it. This is important in order to attempt all or most of the questions because the time available is limited and the speed required can be achieved only through practice.

In general, you must devote more time to the objective type English exercises and Quantitative Aptitude followed by General Knowledge, essay writing, letter writing and precis writing.

Preparation

(a) **Quantitative Aptitude (Objective):** As mentioned above, the QA section contains about 50 questions. These are designed to test the candidate's general ability in arithmetic and not in any specific branch of mathematics. A familiarity with all types of questions in general arithmetic, business arithmetic and elementary algebra is essential.

Preparation for this test may be done through any standard book available for the bank PO exam. The standard books for the GMAT and the GRE are also useful.

(b) **English (Objective):** There are about 100 questions in this section on passage comprehension, vocabulary, sentence correction, sentence completion, etc. Since this section tests the candidate's overall comprehension and knowledge of the English language it is essential to read newspapers and magazines regularly. At least one national daily and one weekly or fortnightly magazine in English has to be read.

In this section, special attention should be paid to develop one's vocabulary in order to attempt the question on synonyms and antonyms. A good word list in any bank PO book consists of about 1500 words. You may try to remember about 15 words every day. Also useful are the relatively common words published in the *Test Your Word Power* section of *CCTimes*.

For other topics in this section, a standard book on the bank PO exam will be adequate as also the GMAT and GRE books.

(c) **General Knowledge (Objective):** There are about 50 questions in this section, most of them being on current affairs. As such, you must keep yourself abreast of current events of national and international importance. For this, note down all major events reported in the newspapers/magazines. Also go through the *Current Events* section of any competition magazine.

(d) **English (Objective):** This forms the second part of the written exam and

consists of an essay, letter-writing and/or precis-writing. Usually the essay is compulsory and a choice is given between writing a letter and writing a precis. Since a good command over the English language is necessary and this can be achieved by reading newspapers and magazines regularly as also by strengthening one's vocabulary.

Anticipating the essay topics is not easy. There will be three to four topics an essay of about 300 words on any one of has to be attempted. Usually one topic will be related to the banking industry and at least one more on a subject of national importance during that period. For instance, in the next six months, there may be one topic on the role of banks in rural development and one on the new educational policy or on political reforms.

Practice Tests

After going through the fundamentals of solving the questions on Quantitative Aptitude and those on English, the best way of proceeding further is to take the practice tests regularly. Such tests can be found in any standard Bank PO book as also in the GMAT/GRE book. Besides, *Practice Tests* appearing in the *CCTimes* also very useful.

Attempt the practice tests questions within a specific time period. For instance, in the exam, usually 50 questions on quantitative aptitude have to be attempted in 30 minutes. This means that a candidate has about 35 seconds to solve one question and mark its answer.

General Tips

- Do not ignore any topic completely even if you have been very good at it in the past. Regular practice before the exam is most essential.
- For the QA test, make a list of formulae and other important points in order to remember them easily and quickly. Some important points in English which may require frequent revision should also be noted down.
- A few days before the exam the *BSRB* sends a test booklet to all the candidates alongwith a specimen of the answer sheet. Practise filling the answer sheet at least once.
- During the exam, if you find a particular question difficult, leave it out and go on to the next question. If you spend more time on a difficult question, you may not get any time for those questions which may be easier for you to solve. The difficult ones can be tackled later, if time permits.
- Read regularly, systematically and sincerely with adequate relaxation in between, to gain confidence and realise that, though the task may be a little difficult, it is not out of reach.

The author makes no mention of the Test of Reasoning questions.

PREPARING FOR THE INTERVIEW

The aim of the interviewer is to get an insight into the candidate's personality and to evaluate his suitability for the job. Mental alertness, balance of judgment, power of assimilation, awareness of events happening around, temperament, leadership, intellectual and moral integrity, ability for social cohesion, etc in the candidate are judged through a friendly but purposive conversation. The interviewer observes whether the candidate is cheerful, keen, confident, sure of himself, willing to learn, shows readiness to accept mistakes and is endowed with an optimistic and cooperative attitude towards life.

The topics that are most commonly raised in an interview are: (1) details of your interest in the bank PO job and the alternatives that you have thought in case you do not get selected for the same; (2) your background, education; (3) knowledge about the banking industry; (4) current events.

The interview board attempts to gauge a candidate's reflexes, clarity of thought and expression and his power of assimilation. For this, one must discuss likely questions with parents or friends. During such discussions, one should try to speak clearly, comprehensively and without any ambiguity. One must be ready to speak about any subject which he may have mentioned in his answer to a particular question. For instance, if a candidate refers to being a good player of cricket, he should know the rules of the game, names of famous test players, etc.

During discussions with friends, one must try to find an opportunity to draw the interviewer's attention to one's achievements and qualities and should refrain from speaking about one's failures and weaknesses.

Psychologists opine that a person performs better in a familiar situation. Simulating an interview in the home or with friends will give the right kind of confidence and will also help in overcoming one's drawbacks in one's sitting posture, etiquette, etc.

The author, now a successful PC, gives an account of his own interview. "The Chairman began with the first question which was on my decision to join the bank as a Probationary Officer. I replied that I was interested in a service-oriented industry, particularly the banking industry, which provided a satisfying and secure job. The second question he asked was on the role of banks in the economy and the improvements that I think should be made

in the banking services. Lastly he asked me about the specific contribution of banks in rural development.

The second member asked my views on the reluctance shown by POs to serve in rural areas and whether I would be willing to work in a village with erratic electric supply. I replied that young POs without the problem of children's education—a major problem in the rural areas—should readily go to these areas.

Regarding working in a village with erratic electric supply I replied that even in a metropolitan city like Calcutta people were not assured of regular electric supply and therefore I did not mind working either in a village or in a metropolitan city. I also stressed that it should be made compulsory for POs to work in rural areas at least for a few initial years.

The third member asked me about the rates of interest on different accounts, whether I had any bank account and whether I knew how to operate the account.

The fourth member then took over and asked a plethora of questions on the election results which had caused quite a stir."

M.J.

BANKING ON FIGURES

1. Number of **bank branches** at the end of 1984-50,980 i.e. roughly one bank office for every 13,000 of the population. At the time of nationalisation in 1968, the number of persons served by each branch stood at 65,000.
2. **Ratio of financial assets to GDP** rose from 38% in 1950 to 73% in 1975 and then to 103% in 1980.
3. The number of **bank employees** has risen from about 1.5 lakhs in June 1969 to over 7 lakhs at the end of 1984.
4. During the fortnight ending Oct 11 **bank deposits** have risen to Rs 78,619.41 crores from Rs 78,539 crores on Sep 27.
5. **Investments** declined from Rs 19,283.08 crores to Rs 18,663.55 crores.
6. **Cash balances** have jumped to Rs 12,315.42 crores from Rs 11,473.42 crores.
7. **Approved securities** have increased to Rs 10,466.56 from Rs 10,233.37 crores.
8. **Borrowings** from RBI have risen from Rs 912.52 crores to Rs 1,038.49 crores.
9. **Food credit** increased to Rs 5,859.58 crores from Rs 5,847.41.
10. **Aggregate advances** rose to Rs 50,702.08 crores from Rs 50,524.66 crores.

S.I.

TERMS OF PAYMENT

ACCOUNTS

Fixed Deposit Accounts are accounts of those bank deposits which have been credited in the bank for a fixed period, specified in advance. Fixed deposits are repayable on the expiry of the specified period, chosen by the depositor. These deposits constitute more than half the total bank deposits.

Savings Bank Account is an account which helps the depositor to save a part of his current income to meet his future needs and also to earn an income from his savings. Banks impose certain restrictions on the savings bank account and at the same time offer a reasonable rate of interest on it.

Recurring Deposits or Cumulative Deposit Accounts are variants of the savings bank account. A depositor opening a recurring deposit account is required to deposit an amount chosen by him, generally a multiple of Rs 5 to Rs 10, in his account every month for a period selected by him. The period of recurring varies from bank to bank.

Current Accounts are running and active accounts which may be operated upon any number of times during a working day.

Joint Account is one opened by two or more persons jointly.

Cheque Book contains bank forms of cheques which are used as an instrument to withdraw money from the bank. In case of a savings bank account a cheque book is provided to only those who have a minimum balance of Rs 100 or Rs 200 to their credit.

Maturity of a promissory note or a bill of exchange is the date on which the payment becomes due.

PAYMENT MODES

Negotiable Instruments are promissory notes, bills of exchange and cheques, payable either to order or the bearer.

Promissory Note is a written promise by the debtor to pay the creditor a certain sum of money.

Cheque is a bill of exchange drawn on a specified banker to be payable only on demand. A **bearer cheque** is a cheque, to pay which, the paying banker need not seek the identification of the bearer of the cheque. "**Crossing**" is an "instruction" given to the paying banker to pay the amount of the cheque through a banker only and not directly to the person presenting it at the counter. In a **crossed cheque** two parallel lines are drawn on the face of the cheque and "and Company" (or "& Co") written in between the lines. The addition of the name of a banker across the face of a cheque constitutes special crossing.

Pay-In-Slips are slips with perforated counter foils used by customers to deposit money by way of either cash, cheques, drafts or bills.

Mail Transfers money can be sent through mail transfers to anyone who has an account. All the sender has to do is to furnish details like the name of the beneficiary, his/her account number, the amount to be transferred and the name of the branch where the account is maintained.

S.I.

THE SECOND GREEN REVOLUTION

After four decades of planning against the background of perennial shortages, India is now faced with a food surplus economy which has caught her policy-makers napping. It may at first sight appear absurd, if not downright callous, to talk of food surpluses in a country where as much as a quarter of the population still does not have enough to eat. But the usually strong "hathia" rains that most of the country has experienced in the last few weeks boosted the country's buffer stocks to 30m tonnes by July; the Food Corporation of India (FCI) estimates that this will rise to 34m tonnes next year and 40m by the end of the Seventh Plan.

The reason for this surplus is the change that has occurred in the traditional foodgrain production pattern in the country. For over two decades the surplus states were the ones that grew wheat while the deficit states grew paddy. As a result wheat had to be shipped in large quantities by the former to the latter group of states. Since the rice revolution, which boosted output by nearly 50% over the peak of 43m tonnes attained in the early seventies, the demand for wheat from the paddy growing states has dropped very sharply. Thus, instead of being a means of taming inflation the grain mountain is now becoming a source of inflation. Things have come to such a pass that it will be cheaper for the government to pay a limited number of wheat farmers to leave their land fallow than to procure excess wheat which has to be added to the food mountain. But this is the kind of antic only the rich, European and North American countries can indulge in; not a country where over 70% of the population is associated with agriculture.

Much of the present mess can be traced to the bad warehousing facilities in India. Geared, as it has been to handling scarcities, the FCI is finding itself totally incapable of managing a surplus. The FCI owns about 9m tonnes of storage capacity. The other storage agencies are the Central Warehousing Corporation and the State Warehousing Corporation, besides private godowns constructed on a guaranteed basis on behalf of the FCI a few years ago. Nearly 3m tonnes are held in open storages throughout the country. It is reported that only 80% of the covered accommodation has been utilised by the FCI, while huge stocks lie in the open under polythene covers.

The problem of warehousing could be mitigated in four ways. Warehousing of foodgrains could be placed under a single agency for better co-ordination and perhaps reduction in the cost of operations. There has to be a complete review of the staffing norms which should bear some relationship to the nature of operations. There have been allegations that most of the top executives of the FCI spend their time tackling union rivalries and staff disputes. It is no exaggeration to mention that none of them has either the time or mood to evolve fresh strategies and plans to tackle the kind of challenging situation which has arisen due to the surplus. The discrepancy between actual utilisation of space as against the full capacity of the godowns is due to the indiscipline labour and bad planning. In a scientifically constructed godown there is always scope for better stack planning and better space utilisation by at least 20%. Stack units (say 1,000 bags per stack) for wheat can go up to 18 or 20 bags high instead of 14. But the labourers refuse to do the higher stacking even when they are offered higher wages. In most storage depots, the top layer would never be completed to form a homogeneous unit. The different varieties of both rice and wheat also add to the problem. The reluctance of labour is probably due to lack of stamina. This leads us to the question of mechanisation of the operations in the godowns—FCI godowns could be equipped with fork lifts, mobile conveyer belts and small cranes besides automatic weightbridges. Finally, computers could be used for stock accounting and staff requirements to eliminate malpractices like manipulation of accounts of receipts and issues and avoid exaggerated transit and storage losses.

But all this will only solve the problem temporarily. More concrete measures could be taken: The government could, for example, abolish the bonus of Rs 5 per quintal given to Punjab farmers for political reasons. The procurement price of wheat could be frozen for two years, thus ensuring profitability without eradicating it.

The Food-For-Work schemes must be expanded and made more labour intensive, with a simultaneous increase in the quota given per person. The export market could also be exploited; the rice grown in the Punjab is of the superfine PR-106 variety which would fetch good prices in the world markets. More than all this, it could make a gift of a million tonnes of grain to the International Emergency Food Reserve. But as a long-term measure, the government could use the price mechanism to make farmers switch from

wheat to other crops—pulses, oilseeds, vegetables, trees and fodder crops. Crops like pulses and oil seeds need much less irrigation than rice and wheat—so irrigation resources could be stretched much further by a shift in production.

Some very drastic steps will have to be taken on India's surplus food, instead of enriching her, will ultimately bankrupt her.

SEVENTH PLAN

The drafters of the Seventh Plan have been luckier than drafters of previous plans, in that they have had a stronger base to work on since the Sixth Plan has been somewhat of a success and the Indian economy has moved to a higher growth plan since the mid-seventies. The Sixth Plan aggregate growth target of 5.2% has been achieved.

In agriculture, while the production target was 3.8, the actuals stood at 4.4%. But in industry, the performance fell short of target in basic industries like steel, fertiliser and cement, and textiles. The overall growth rate of industrial production was also unstable from year to year (6.9%—target; actuals 3.9%). The output of commercial energy, measured in terms of coal replacement, increased at an annual rate of 12% over the Sixth Plan. An outstanding feature of this growth was the increase in crude oil production from 11.8m tonnes in 1979-80 to 29m tonnes in 1984-85. Gross investment in the Sixth Plan amounted to about Rs 1,43,000 crores (in 1979-80 prices) against the Sixth Plan expectation of Rs 1,59,000 crores. As for domestic savings, the Plan had anticipated a gross savings rate of 24.5% in 1984-85, against which the actual rate is likely to be 23.3%.

The Seventh Plan proposes to finance a public sector plan of Rs 1,80,000 crores, which it proposes to cover through Rs 23,500 crores in additional taxation from the Centre and the states, besides existing taxation levels; deficit financing for Rs 14,000 crores and a net inflow of foreign funds of Rs 18,000 crores. The draft Plan estimates thus imply reversal of the thrust of this year's budget, particularly in regard to direct taxes. The Plan, for instance, stipulates that there would be additional resource mobilisation of Rs 2,000 crores through direct taxes. This year's budget, apart from abolition of estate duty, gave a relief of Rs 197 crores, in income-tax.

The financial allocations have been increased from Rs 7,444 crores to Rs 10,474 crores for agriculture; from Rs 6,114 crores to Rs 8,944 crores for rural development; from Rs 1,571 crores to Rs 2,945 crores for special area programme;

from Rs 10,925 crores to Rs 16,979 crores for irrigation and flood control; from Rs 31,061 crores to Rs 55,021 crores for energy; from Rs 17,176 crores to Rs 23,941 crores for industry and minerals; from Rs 14,024 crores to Rs 29,971 crores for transport; from Rs 3,493 crores to Rs 6,372 crores for telecommunication, broadcasting and TV; from Rs 1,158 crores to Rs 2,306 crores for science and technology; and from Rs 15,800 crores to Rs 28,360 crores for social services.

Interestingly, the Plan allocation for civil aviation, which is looked after by the Prime Minister, has been cut from Rs 931 crores in the Sixth Plan to Rs 758 crores in the Seventh Plan. The allocation for industry is still much higher than that for agriculture; evidently, the government does not intend to change the thrust of the previous plans which concentrated mainly on heavy industry. The only exception was the First Plan which was agriculture-oriented and, suggestively, was the only Plan to have been successfully implemented. Energy and social services have also got a big rise in allocation. The high allocation for energy is understandable. A rapid increase in the production of domestic crude decreased the import to consumption ratio for crude oil and petroleum products from about 73% in 1979-80 to 34% in 1984-85. Had the import ratio for these two commodities remained at the 1979-80 levels, the import bill in 1984-85 would have been higher by about Rs 4,000 crores, and posed a virtually unsurmountable problem for the balance of payments. In accordance with Rajiv Gandhi's aims to take the country to the 21st century, the Plan envisages a rapid expansion in the production of computer telecommunication equipment, process control systems and consumer items like television sets. The overall strategy for the Seventh Plan lays special emphasis on (a) improvement in infrastructural facilities particularly power (b) greater attention, modernisation and maintenance of assets (c) upgradation of technology (d) improvement in productivity (e) reduction in cost and improved competitiveness (f) introduction of new products and (g) a special effort at accelerated development in selected industries in which the country has comparative advantage.

TAXATION POLICY

Taxation policy has often, in world politics, proved to be a statesman's Waterloo as happened in the Reagan-Mondale battle for the American Presidency. For years, our taxation policy meant only one thing—tax to the utmost. But, the winds of change that blew the present government into power,

have reached our taxation policy-makers as well and they are calling a new tune—“Tax less, collect more”.

Although the fiscal policy is only to be decided upon during the winter session of the Parliament, the Finance Minister, V. P. Singh's pronouncements have been clear enough about the intended direction of the policy. The proportionate share of indirect taxes in the Central Budget is proposed to be reduced progressively. A policy on administered prices will be formulated to see that the price rise in some vital areas like coal and power do not have a cumulative impact.

The government also proposes to introduce structural changes in excise tariffs. Though it will concentrate, as earlier, on 30-odd items that account for the bulk of the excise revenue, it will eventually do away with the residual items under which all unspecified manufacturers attract excise duty at a flat rate which currently stands at 12%. Changes will be made in customs tariff to “harmonise” import and export duties with excise. Tribunals will be set up to decide disputes about the classification of goods under customs and excise tariffs. Market prices at home and overseas will be computerised to check under and over-invoicing.

Progressive reduction will be made in the preferential treatment being given to small-scale units so that the tendency towards fragmentation of capacity is arrested and all manufacturers have an incentive to achieve economies of scale. Apparently, many associations of small entrepreneurs have indicated to the government that they are quite prepared to forego “positive discrimination” in tax rates provided they are freed from the harassment of elaborate accounting and frequent visits by greedy excise inspectors.

But the most important change will be in cuts on direct taxation as the Budget has already indicated. Then, the finance minister had given away Rs 200 crores in income-taxes due to various tax-cuts. Yet, the first quarter's advance tax returns showed that tax collections had gone up by 50% in Delhi and the northern region. In Bombay, also, which accounts for the bulk of the income-tax collections in the country, collections rose by 44%. Thus, the Delhi trend is clearly a nationwide one and there is no reason to hope that the income-tax will yield about 40% more than it did last year. Obviously, the lesson has gone home and V.P. Singh will apparently be in a mood to give more tax concessions.

This will bring in several gains to the economy. Since most of the additional Rs 10,000 crores that will have to be declared to induce this spurt, will not come out of what was previously ‘black

consumption but ‘black savings’, it will be re-invested in legitimate channels of savings and investment. A great deal of money has already moved into the share market, for, between budget day and the end of August, *The Economic Times* share price index rose by 60% and the RBI's index by 55%. Thus, there is roughly 60% more money invested in existing shares than there was six months ago.

The government can also take advantage of this sudden increase in supply of legitimate savings to lower the bank rate, and thus bring down the entire structure of interest rates by 1 to 2%. Since the Central and state governments are the biggest borrowers, for every 1% fall in their interest rate, the Central budget deficit will decline by Rs 1,400 crores while that of the states will fall by Rs 400 to 450 crores.

On the assumption that an additional Rs 6,000 crores to Rs 7,000 crores will be available in the ‘white’ economy, over the five years of the Seventh Plan, between Rs 35,000 and Rs 50,000 crores of additional resources will become available to the government and the private sector. Thus, unless this money is frittered away in non-developmental expenditure, the much feared resource crises the Seventh Plan is faced with may already be a thing of the past.

Reforms could be in the area of capital gains tax. The area of approved securities should be substantially increased and should include equity shares also. The present time limit of three years if invested in the construction of houses should be increased or totally withdrawn in case of co-operative housing.

Exemption in income-tax should be given to the whole amount invested in housing, including housing schemes.

Dividend tax could also be cancelled altogether as it involves double taxation because dividends are declared out of the taxed profits. Again, since the large share holders are financial institutions which hold over 25% of the total shares of Indian companies, the tax is actually paid by them. The profitability of the financial institutions is thus eroded. The withdrawal of the tax would not only increase the profitability of the institutions but also boost the capital market. The private sector will have to raise vast resources from the capital market and this can be possible only if the capital market is kept buoyant.

Finally, institutions providing finance for the corporate sector may be allowed to accept deposits at a nominal rate of 5% where the parties do not want questions to be raised on the source of their funds. This will enable black money to be channelised into the white sector.

S.I.

THE UN STORY

Much talk and less work has reduced the UN to an ineffective organisation which in the 40 years of its existence, has failed in its primary task of maintaining world peace. Yet, few would like to see the UN disbanded. A close look at the happenings in the major international forum.

40 YEARS OF UN

A delegate to the San Francisco conference, John Foster Dulles said that the UN Charter could be "a greater Magna Carta". Forty years later an Indian diplomat, Rikhi Jaipal, remarked that it is fast becoming "a poor nations club that has seen better days." One of the main criticisms against the UN that there is too much talk and very little action conducted within its halls, is, to a large extent, justified. Although UN peace keeping forces do serve as a buffer between potential combatants on a few global hotspots and multinational UN forces patrol the Golan Heights, southern Lebanon and the no-mans land between Greek and Turkish Cyprus, they have failed to cushion nations from attack on several occasions. This was especially true of the infamous occasion when the UN pulled its troops out of the river peninsula at the instance of a six-day war between Egypt and Israel in 1967. Further, the superpowers have repeatedly brushed aside the UN, especially when they waged their bloody wars in Vietnam and Afghanistan. In fact since the Korean conflict of the early '50s, the UN has never forcefully intervened in a war to restore peace.

Part of the responsibility for the failure of the UN as a peace-keeper lies with the Security Council, especially the superpowers. In the early days, the UN was dominated by the Western powers and they shaped the Security Council according to their needs. Each of the five permanent members has a veto which has created impossible bottlenecks in resolving conflicts. The US dominated the UN in the first 15 years of its existence and hence it found it unnecessary to use its veto power frequently. Thus it used it only once in the first 25 years, and second time in 1972 in favour of Israel. But, in the last 10 years, it has used it as many as 28 times in favour of Israel, South Africa and its other friends. Russia has used its veto power 27 times, France and Britain four times each, Nationalist China once and the People's Republic of China, which replaced Nationalist China in the Security

Council in 1971, once. While some political thinkers feel that the veto power is useful because it has helped to preserve the UN, it cannot be denied that it has often tied the hands of the UN, since the responsibility of peace keeping lies with the Allies.

However, one must not ignore the achievements of the UN in other fields. It is said that the UN decolonisation committee has become redundant and uses up too much of valuable funds. The membership of the UN has mushroomed from 50 to 159 and more than 70 of the present members were territories under colonial rule when the UN was founded. The UN actively helped a number of them gain independence, viz. (British) Togoland, (British) Camerouns (Dutch), Nao Guinea, Zimbabwe, etc. It has also helped to settle some international crises like the Cyprus crisis of 1976.

But the real achievements of the UN lie not in the winding debates at the General Assembly, but in its many far-flung agencies which deal with important matters, like the collection of weather statistics (by the World Meteorological Organisation) or the standardisation of international mail delivery (by the Universal Postal Union). Other agencies are directly involved in saving lives. The UN Office of the High Commissioner for Refugees claims that it has helped place some 25m stateless people. The World Health Organisation (WHO) has eradicated small pox from the planet and considerably reduced malaria in many tropical countries. The UNICEF and WHO have also revolutionised child health care in developing countries. The Integrated Child Development Services (ICDS), for instance, has succeeded in making a dent in the estimated 3m deaths of children in India from diarrhoea and childhood diseases. The UN also helps countries stricken by natural disasters. For example the Office of Emergency Operations today spearheads massive famine relief efforts in Africa. The World Food Programme sent Rs 5.3 crores worth of food aid to victims of drought and other calamities in Ghaur, Mauritania, Indonesia and Sri Lanka, in 1983. At another level, the UN Development Programme (UNDP) has given

assistance, worth billions of dollars to developing countries, since 1948. In fact, India should be grateful to the UN for its agricultural revolution. The UN has done much good work in areas of women's rights, human rights, food, water, environment, etc. There are some who even feel that the UN should keep international politics totally out of its arena and concentrate on matters involving the day to day development problems of humanity. However, even in such fields the UN would have succeeded more had the UN funds reached their intended beneficiaries.

This year, on the 40th anniversary of the UN (see *Current Events*), the UN is under fire from all sides. The US has demanded weighing of voting in the General Assembly in accordance with the financial contribution of each member country, and has threatened to cut back its share of the UN's annual \$ 806m budget from 25% to 20% if the UN did not agree to do so by the end of 1986. The Soviet Union, on its part, has refused to pay for any peacekeeping forces. Criticism is also levelled at its expensive bureaucracy.

However, despite its many failings, public opinion polls around the world show that while many people are disappointed by the UN's performance, few would like to see it disbanded. What is perhaps required to make the organisation more effective is less talk on differences between nations and more work towards the resolution of conflicts. S B & S L

UN AT WORK

While presenting his annual report to the General Assembly, on Sept 5, 1985, the UN Secretary-General, Javier Perez de Cuellar, said, "We face today a world of almost infinite promise which is also a world of potentially terminal danger." It was precisely to avoid such danger and create a world of such promise that the UN was formed 40 years ago.

The name United Nations (UN) was adopted during World War II to denote nations allied in opposition to the axis

powers—Germany, Italy and Japan—and later adopted as the name of the postwar world organisation. Conceived by President Franklin D. Roosevelt, the term first achieved worldwide prominence when the Declaration of the United Nations was signed by 26 states on Jan. 1, 1942, setting forth the war aims of the allied powers.

The UN Charter

The first major step towards the formulation of a permanent organisation was taken at the Dumbarton Oaks conference—a meeting of diplomatic experts of the big four powers (USA, UK, USSR, China)—held from Aug 21 to Oct 7, 1944.

The Dumbarton Oaks proposals, modified by proposals presented at the Yalta conference, formed the basis of negotiations at the UN Conference of International Organisation (UNICO), convened at San Francisco on Apr 25, 1945, and drafted the Charter of the UN. The Charter was signed on June 26, 1945, by the representatives of the 50 countries; Poland, not represented at the conference, signed later and became one of the 51 original member states. The UN officially came into existence on Oct 24, 1945, when the Charter had been ratified by a majority of the signatories. This day is celebrated as UN Day throughout the world.

The signing of the Charter signalled the repudiation of wars, renewal of faith in peace and a desperate bid by mankind to survive. Less significantly, the San Francisco conference was the first major international conference for two millenniums without being dominated by Europe.

The aims of the UN, as set forth in the Charter, are: to maintain international peace and security; to develop friendly relations among nations; to co-operate internationally in solving international economic, social, cultural and humanitarian problems and in promoting respect for human rights and fundamental freedoms; to be a centre for harmonising the actions of nations in attaining these common ends.

The UN acts in accordance with the following principles: all member states are sovereign and equal; all member states shall fulfill in good faith their obligations under the Charter; all members shall settle their international disputes by peaceful means and shall refrain from the threat or use of force against any state; and all members shall assist the UN in any action it takes in accordance with the Charter.

It was only in 1946 that New York was chosen as the UN headquarters. The first site of the UN Secretariat was at Church House in London, and the first General Assembly meeting was at Central Hall,

Westminster. Membership to the UN is open to all peace-loving nations which accept the obligations of the UN Charter. As of January, 1985, its membership stands at 159. Under the Charter, the official languages of the UN are Chinese, English, French, Russian and Spanish. Arabic was added as the official language of the General Assembly, the Security Council and the Economic and Social Council.

The Charter established six principal organs of the UN: the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice and the Secretariat. Except the Court, which is located at The Hague, in the Netherlands, all the others are based at the UN headquarters in New York.

General Assembly

Functioning almost like a 'World Parliament', the General Assembly is the deliberative organ of the UN where all the members have one vote. Decisions on ordinary matters are taken by a simple majority, while those on important questions like recommendations on peace and security, admission of new members and budgetary matters, require a two-third majority. The Assembly holds its regular session from mid-September to mid-December each year. Special or emergency sessions are held when necessary. Even when not in session its work goes on in special committees concerned with specific topics like the First Committee (disarmament and related international security matters); special Political Committee; Second Committee (economic and financial matters); Third Committee (social, humanitarian and cultural matters); Fourth Committee (decolonisation matters); Fifth Committee (administrative and budgetary matters); and Sixth Committee (legal matters). Although the Assembly has no power to compel action by any government, its recommendations carry the weight of world opinion.

Security Council

The organ to which the Charter gives primary responsibility for maintaining peace and security is the Security Council—the only inter-governmental body of the UN which is permanently in session. The Council has 15 members, of which China, France, the USSR, UK and the USA are permanent members. The other 10 are elected by the Assembly for two-year terms. Except in votes on procedural questions, a decision cannot be taken if one of the permanent members vetoes it. In case of a threat to peace the Council usually first asks the parties to negotiate and sometimes the Secretary-General is requested to investigate and report on the

situation. It may itself undertake investigation and mediation or set forth principles for a settlement. The Council exercises the trusteeship functions of the United Nations in "strategic areas". The duties of the Council also include recommendations to the Assembly of a candidate for the post of Secretary-General and the admission of new members to the UN.

Other Organs

Working under the authority of the General Assembly, the Economic and Social Council (which has 54 members) co-ordinates the economic and social affairs of the UN and the related specialised agencies and institutions. The Council's duties include making recommendations and guiding activities aimed at spurring world trade, encouraging economic growth of the developing countries, promoting the observance of human rights, improving the status of women, ending discrimination against minorities, securing the better use of natural resources and energy, spreading the benefits of science and technology, administering UN aid programmes, and fostering world co-operation in areas such as better housing, family planning or prevention of crime.

The Trusteeship Council was established to ensure that governments responsible for the administration of Trust Territories took adequate steps to prepare them for self-government or independence. The Council, which now has five members, is the only organ whose activities have diminished over the years.

The International Court of Justice is the principal judicial organ of the UN. It consists of 15 judges elected by the General Assembly and the Security Council. Only states may be parties in contentious cases brought before the Court. But a State can also refuse to abide by the Court's decision.

The Secretariat works for the other organs of the UN and administers the day-to-day programmes and policies laid down by them. Its head, the Secretary-General, has many functions one of which is to bring to the attention of the Security Council any matter which, in his opinion, threatens international peace and security.

Decades

Beginning in 1960, the General Assembly has proclaimed three successive United Nations Development Decades to aid developing countries. To achieve the aims set forth during these decades, the UN set up a number of specialised agencies. The United Nations Development Programme (UNDP), an amalgamation of the Expanded Programme (1949) and the Special Fund (1959), is the major channel of funding for the specialised agencies in the UN system. The UNDP supports some 5,000 projects each year in more than 150 countries and territories; the volume

of field development work being carried out under its auspices being over \$ 1.7b annually, though member countries pay over half the costs involved.

The first United Nations Conference on Trade and Development (UNCTAD), held in Geneva in 1964, led to the establishment of UNCTAD, as a permanent organ of the General Assembly in December the same year. UNCTAD negotiates and adopts multilateral legal instruments in the field of international trade. To deal with perennial problems of low and erratic prices of raw materials in world trade on which most developing countries depend heavily for export earnings, UNCTAD adopted the Integrated Programme for Commodities in 1976, an agreement involving specific commodities—natural rubber (1979), cocoa (1980) and tin (1981). Other multilateral agreements include the Convention on a Code of Conduct for Linear Conferences (1974); the Set of Multilaterally Agreed Equitable Principles and Rules for the Control of Restrictive Business Practices (1980); and the United Nations Convention on International Multimodal Transport of Goods (1980).

The United Nations Industrial Development Organisation (UNIDO) was established in 1967, to promote and accelerate the industrialisation of the developing countries and co-ordinate all UN activities in this field.

In a 1952 resolution, the General Assembly had declared that developing countries had "the right to determine freely the use of their natural resources." Subsequently, the Economic and Social Council established the Committee on Natural Resources in 1970 followed by the establishment of the United Nations Revolving Fund for Natural Resources Exploration in 1973. When petroleum prices shot up in the 1970s and the world began to realise that known supplies of this precious commodity would not last forever, attention was focussed on new and renewable sources of energy. This led to the United Nations Conference on New and Renewable Sources of Energy, in Nairobi in August 1981.

Environment

The United Nations Environment Program, created in 1972 monitors significant changes in the environment and encourages, and co-ordinates sound environmental practices. Current UNDP projects deal with marine pollution in the Mediterranean, the Kuwait region, the Red Sea, and the Gulf of Aden, the Wider Caribbean, East, West and Central Africa, the East Asian Seas and the South-East and South-West Pacific; stopping the spread of deserts in the Sudano-Sahelian region of Africa; and the ecology of rural and urban settlements, among others.

Located in Nairobi, is HABITAT, the UN centre concerned with housing, settlements and related environmental planning. Its projects cover such areas as national settlement policies and programmes, rural and urban housing and infrastructure development, slum upgrading and sites-and-services schemes, etc.

The World Food Council seeks to promote the establishment of an effective system of world food security through more open trade and assurances of continuity of food supplies for developing countries. Other food aid programmes include the World Food Programme, which it sponsors jointly with FAO and the International Fund for Agricultural Development which finances food production in developing countries.

Population

With the world's population increasing by leaps and bounds, the United Nations turned its attention to the problem and formed the United Nations Funds for Population Activities (UNFPA). UNFPA is now the largest internationally-funded source of assistance to population programmes in developing countries.

Ever since the General Assembly convened the World Conference of the International Women's Year in Mexico in 1975, international recognition of the important role women play in development has increased. 1975 was declared the International Women's Year, focussing on the three-fold objective of equality, development and peace.

UNICEF

The United Nations International Children's Emergency Fund (UNICEF) was created by the General Assembly in 1946, to meet the emergency needs of children in post-war Europe and China for food, drugs and clothing. In 1950, the Assembly changed the main emphasis of the fund's mandate to programmes of long-range benefit to children of developing countries. Three years later, the Assembly decided that UNICEF should continue this work indefinitely; its name was changed to the United Nations Children's Fund, but the well-known acronym UNICEF was retained. Under its Basic Services strategy, adopted in 1976, UNICEF assists governments to plan, develop and extend low-cost community-based services in the inter-related fields of maternal and child health, applied nutrition, clean water and sanitation, formal and non-formal education, responsible parenthood and supporting services for women and girls. When the General Assembly designated 1979 as the International Year of the Child, UNICEF served as the 'lead agency', co-ordinating the activities of the United Nations system.

The UN's scope covers various other fields as well—youth and development

(1985 has been proclaimed International Youth Year); the elderly and the aging; disabled persons; Human Rights; refugees—the United Nations High Commissioner for Refugees (UNHCR) was awarded the Nobel Peace Prize in 1954 and 1981; international control of narcotic drugs and psychotropic substances; prevention of crime and treatment of offenders; training and research, through the United Nations Institute for Training and Research (UNITAR); decolonisation; and international law.

Following World War II, the UN became a kind of 'roof organisation' for the major enterprises in systematic international co-operation. Almost 15 of the agencies are known as 'specialized agencies' who report to the Economic and Social Council annually. They are: the International Labour Organisation (ILO), Food and Agriculture Organisation of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the World Health Organisation (WHO), World Bank/International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC), International Monetary Fund (IMF), International Civil Aviation Organisation (ICAO), Universal Postal Union (UPU), International Telecommunication Union (ITU), World Meteorological Organisation (WMO), International Maritime Organisation (IMO), World Intellectual Property Organisation (WIPO), International Fund for Agricultural Development (IFAD), The International Atomic Energy Agency (IAEA), established in 1957, reports to the General Assembly. The General Agreement on Tariffs and Trade (GATT) is a multilateral agreement which lays down rules for international trade.

LUCKY OR UNLUCKY?

This is the most ominous of all numbers, and plays an important part in the superstitions of the world.

Hotels and buildings avoid it in the marking of their rooms and floors. The source of this superstition is said to have been the Last Supper, when 13 diners sat down at the table and one of them deceived Christ.

In American history the number seems to have lacked any sinister connotations. The history of USA started with 13 colonies. The US flag has 13 stars and 13 stripes.

The German composer Richard Wagner considered the number lucky. His name contained 13 letters and he was born in 1813. He left school at the age of 13, loved 13 women and died on Feb 13, 1883.

The famous cricket player Gurusamma Viswanath considers the number very unlucky. The number is said to have destroyed his career—he would always lose his wicket when his score stood at 13.

Ravi Ajitsariva, Gauhati

INSTITUTIONS NATIONAL DEFENCE COLLEGE

BY JYOTSNA SHARMA



Starting a new series on the premier institutions of India. Some well-known and some not-so-well-known. Information-packed to increase your awareness about your country. This time featuring the National Defence College—the only one of its kind in India and ranked among the best in the world.

Winning a war requires not only great understanding and co-operation among the three defence services of a nation, viz, the Army, the Navy and the Air Force, but also interaction with civil authorities. World War I taught the UK this invaluable lesson. And, in 1927, the Imperial Defence College or the Royal College of Defence Studies, as it is now called, was established in London where for the first time ever, senior civilian and military officers came together to jointly analyse the complex problems of national security. Soon the idea was adopted by the US and Canada and 25 years ago, by India too.

On Apr 27, 1960, the National Defence College (NDC), located at New Delhi, was inaugurated by the then PM Jawaharlal Nehru. Ranked among the world's best defence institutions today, the NDC is undoubtedly the highest seat of learning for future policy makers of the country. The college conducts a ten-and-a-half-month course, annually, from the first week of January to the third week of November. The object of the course is to encourage free exchange of ideas in an informal and relaxed atmosphere so as to broaden the horizons of the 'student' officers as well as their understanding of the various factors—economic, political, military, scientific and organisational—

involved in the planning of national strategy. It also widens their global outlook.

Says a senior member of the faculty: "The course provides the students with an enormous opportunity to reflect and brings about a refinement of their overall intellectual build up." The atmosphere, too, he points out, is particularly conducive to self-learning as each man is free to express his views and ideas freely. More importantly there is no fear of evaluation.

Course Content

The syllabus of the course consists of a study of the socio-political and economic developments of the country, the major powers of the world and India's neighbours in particular, their policies and the problems of India's defence and security. All this culminates in the formation of a national strategy for the country in the coming decade. The faculty does not have a direct involvement in teaching. It, however, plans the study with respect to its structure, content, goals and objectives and accordingly arranges lectures by experts and field tours. The guest lecture programmes form a particularly important part of the course. For the subject under study the best available authority on the subject is invited to deliver a lecture following which the students have an informal question-answer session with him which encourages free and frank exchange of ideas. This also helps them fortify, modify or alter their views.

A batch of 60 officers, including 12 foreigners, attend the course every year. Indian officers—both civilian and defence—are nominated for the course. Only 'high fliers with potential to go places' and having brilliant service records are selected for the course. The foreign students are taken on an exchange basis. The students are divided into five Integrated Analysis Groups (IAG) of 12 members each. Each IAG undertakes a total of 11 studies of which three relate to the Indian environment, social and political issues, economy, science and technology while seven relate to the international environment affecting India's security. Each IAG prepares a paper at the end of each study in which it gives its recommendations. As an alumni member of the NDC puts it: "The focus in such a study is on 'what should have been done.'" All these studies lead to the final and most important study of national

security. The papers presented by the IAGs are circulated among them and discussed at length whereupon a general consensus is evolved. For each study the composition of the IAGs changes so that every officer gets an opportunity to work with all his fellow students. Field tours are conducted, too, including visits to industrial complexes, frontier areas, service establishments and ten neighbouring countries. At the end of each session each officer is required to submit a thesis on any particular aspect of a national or international problem in which he is particularly interested.

Foreign Students

Interaction among high ranking officials of various countries goes a long way in creating better relations among them. Also the problems of neighbouring countries are similar to some extent. Thereby they can learn from each other's experiences.

The Indian officers, too, learn from their foreign counterparts. This interaction with officers of other countries gives them a better idea of their standing vis-a-vis the developed and developing nations, and their geo-strategic location.

General Reactions

According to an alumni member who is currently a joint secretary with the Government of India: "The course is essentially designed to widen your outlook. This kind of exposure is beneficial as you can visualise exactly where your work stands in the wider framework of things. Also you get a comprehensive overview of the state of the nation from various perspectives." Another alumni member echoes the same sentiment, and adds, "Exposure to diametrically opposite conditions is made possible through students exchange."

The NDC course is undoubtedly of tremendous value to the top brass of any country. PM Rajiv Gandhi said in his message to the college on the occasion of its silver jubilee: "The defence of the country is not the responsibility of the armed forces alone.... It is also important that senior defence officers and senior officers of our civil services get an opportunity, on the eve of their induction into the highest levels of their respective careers, to interact with each other so as to broaden and deepen their understanding and perceptions. The courses conducted by the National Defence College enable this to happen." As Admiral R.H. Tahliani, Chief of Naval Staff, puts it "Some of the top decision-makers both in the informed fraternity and amongst the civilian-officers must continue to pass through its (NDC) portals and get an insight into all the complex factors which govern national security in its broadest sense."

BETTER ENGLISH

LETTER-WRITING

BY RAGHU BHATNAGAR & RAJUL BHARGAVA, University of Rajasthan, Jaipur

Handle with care! That's what the sensitive business of letter-writing is all about. The 'whys' and the 'hows' of this subtle exercise. For the Bank (PO) and other forthcoming exams.

Both individuals and organisations have to deal with other individuals and organisations. In some cases direct contact is possible. In most, indirect means have to be employed. One of which is correspondence. Three factors play a crucial role in any correspondence. They are the subject/topic, the audience and the purpose. Of these the subject or the topic is given. Conscious care has to be taken of the other two factors. The correspondent must take into account the nature of the audience, their values, knowledge, and maturity. Above all, he must pay proper heed to their ego or self-esteem.

The most neutral letter is one that merely seeks to convey information. However, more often than not the purpose of writing is to make the reader agree with the writer's opinion, or take some action, or both. Nothing will defeat this purpose more than the assumption by the writer that what matters most is his own personal perspective without paying proper attention to that of the reader.

Closely related to the concepts of subject, audience and purpose is the concept of tone, which refers to the writer's attitude towards his subject and audience/readers. The tone of a piece of writing is revealed through the writer's style and is usually indicated by labels such as formal, casual, serious, solemn, humorous, ironic, contemptuous, condescending and so on.

How important the above factors are in good correspondence is best illustrated by taking two examples, the first a piece of bad writing and the second that of good

First Version

Sept 10, 1985

Mrs Kavita Dey
Editor, *Monthly Digest*
22, Nizamuddin East
New Delhi

Dear Mrs Dey,

The coverage of youth activities in your

magazine is inexcusably lousy. During the past four months youth programmes both at the centre and state levels have barely been mentioned. This is simply scandalous. Your special correspondent doing write-ups on youth activities is a half-witted bore.

Do I have to remind you that some 60% of your readership consists of people aged between 20 and 25? How would you feel if they cancelled their subscription to the *Monthly Digest*?

Yours sincerely,
(Signature)
Ravi Verma

(A Young Subscriber)

Second Version

Sept 10, 1985

Mrs Kavita Dey
Editor, *Monthly Digest*
22, Nizamuddin East
New Delhi
Dear Mrs Dey,

As a young admirer of your magazine, *Monthly Digest*, I have been its subscriber ever since its inception. However, of late I have noticed a minor defect, which is of course no reflection on the otherwise excellent overall quality of the magazine. There has been a steady increase in youth activities in the country but for some inexplicable reason their coverage in your esteemed magazine has lost both verve and volume. I am sure this is an unintended lapse and no policy decision. Its removal will win you new subscribers.

Yours sincerely,
(Signature)
Ravi Verma

An angry, offensive and insulting tone is bound to get a hostile reaction. Such will be the fate of the first version. On the other hand the second version will result in positive action and may even earn the gratitude of the editor. The difference between the two versions is essentially that of tone. If effective communication is the transferring of a thought or a message to another party so that it can be understood and acted upon, then both effectiveness and communicability will overwhelmingly depend upon the tone of the communication.

Let us now consider some of the points in writing effective letters. Since there is no face to face contact in letter-writing, utmost care must be taken to avoid caus-

ing confusion or misunderstanding by making the letters as clear and concise as possible.

Clarity belongs as much to thoughts as to expression. First of all the writer of a letter should be clear about what he wants to convey. Confused thinking results in lack of purpose and it in turn takes away from the effectiveness of communication. Similarly, imprecise expression caused by bad syntax, wrong choice of words and excessive length of sentences cause misunderstanding and failure to get the desired response.

For being concise the writer should be to-the-point and logical. He must also avoid all padding. The last quality requires both coherence and orderliness. The basic rules of good paragraph-writing must be followed in writing letters too. Each paragraph should have unity and proper sequencing of ideas with smooth inter-sentence transitions.

Courtesy and politeness are as much virtues of good correspondence as of good behaviour. Part of courtesy lies in making letters easy to deal with. This is best ensured by giving a reference and a subject, wherever necessary. Many foreign firms and organisations have the normal practice of printing *your reference* and *our reference* on their letter heads, usually below the date line:

Sept 14, 1985

Your ref.

Our ref.

As for the subject, it can be typed or written either above the salutation or between the salutation and the body of the letter as follows:

Suburban water supply—need for revamping
Dear Sir,
It is an open secret that suburban...
or

Dear Sir,
Suburban water supply—need for revamping.
It is an open secret that suburban...

We may now consider matters of form and arrangement first in relation to personal and then business letters, though quite a few points are common to both.

PERSONAL LETTERS

The Address

It is usual to write full postal address of the sender in the top right hand corner of the note paper.

Narula House
24, Tilak Marg
Civil Lines
Bombay 400 039

The Date

The date can be written in several ways, e.g.

Thursday, 12th Sept. 1985

12th Sept. 1985

Sept 12th, 1985

Sept 12, 1985

However, for the sake of consistency any one of the above ways should be selected and adhered to. A full stop at the end of the date is not necessary and the date is always written below the sender's address.

The Salutation

All personal letters usually begin with a 'Dear' followed by the receiver's name. The actual form of the name depends upon the level of familiarity or formality which exists between the sender and the receiver. The tendency to address a person only by his surname without his title (i.e. Mr, Mrs, Miss, Ms) must be avoided.

So far as punctuation after the salutation is concerned, the British practice—which has been adopted here—is to place a comma, whereas the American practice is to place a colon, e.g.

Dear Miss Saxena, (British)

Dear Miss Saxena: (American)

A good convention to follow is to use small *f, m, s,* and *b* in father, mother, sister, and brother when they are used as kinship terms and to use capital letters when the terms refer to members of a Christian religious order.

The Conclusion

Personal letters generally end with a short sentence like

I wish you a really nice holiday. Yours sincerely,

This is a perfectly good ending. However, trouble arises when a letter ends with a sentence beginning with a participle and two conventions are not observed—placing a comma at the end of the sentence and adding the words 'I remain' with another comma after them. Thus it will be right to write:

Wishing you a really nice holiday, I remain,
Yours sincerely,

The Complimentary Close

The most common ending used in a personal letter is 'Yours sincerely', or 'Sincerely yours.' However, depending upon the closeness and intimacy of the relationship between the addresser and the addressee the following endings are also in order.

'Yours,' 'Yours as ever,' 'Yours affectionately.'

FORMAL LETTERS

Address and Date

Their layout is the same as that of personal letters.

Addressee's Address

Both in formal and business letters the address of the addressee is written on the left side of the page, just above the salutation but below the level of the date as follows

127 Grand Road
Star Avenue
Bombay 400 029
Sept 15, 1985

Messrs Atma Ram & Co.

37, Circular Road
Calcutta 700 019

Dear Sirs,

Some people prefer to write the addressee's address at the end of the letter on the left side of the page below the level of the signature. For example
I look forward to receiving your reply.

Yours faithfully,
R.A. Rahim

Messrs. Atma Ram & Co.

37, Circular Road
Calcutta-700 019.

The Salutation

Dear Sir where name of the addressee is not known

Dear Madam

Dear Mr/Mrs/Miss/Ms Purohit

Dear Sirs (when addressed to a firm, i.e., a partnership).

BUSINESS LETTERS

The Address

There is no difference in the layout of the address and the date, except that most firms and business houses have their own printed letterheads which give the name and address of the firm/business house. If that is the case the general layout of the upper half of the letter will take the following form:

Telegram: Bhavisu
BHARTIYA VIDYALAYA SUPPLIERS
Telephone: 620111
3, Garden Colony, Chennanagar
Madras 600 021.

September 14, 1985

Our Ref: BYS/GM/502

Your Ref: RB/PS/193

The Addressee's Address

Here too the same practice is observed as described earlier in the case of formal letters. But in some cases there may be an extra attention line, which means that the letter is for the attention of a particular person. The attention line occurs above the addressee's address:

For the attention of Mr V.M. Sinha

Messrs Atma Ram & Co.,
37, Circular Road
Calcutta-700 019.

The Reference Line

Two positions are possible in this case. The first has been given earlier while discussing the address on the letterhead of a business letter. The other may be on the left of the page opposite the date line.

The Salutation

This has been dealt with under formal

letters. As stated there, the common form is 'Dear Sirs' when addressed to a partner and 'Dear Sir/Madam' in other cases.

The Subject Line

It was said in the beginning that it is necessary to mention the subject at the head of a letter. The subject line can occur either just above the salutation or between the salutation and the body of the letter.

Our order No. 529 for staplers

Dear Sirs,

or

Dear Sirs,

Our order No 529 for staplers

The Complimentary Close

This too is the same as informal letters. One fact worth remembering, however, is that if the letter has been written on behalf of the firm/partnership, the name of the firm must be typed between the complimentary close (usually, Yours faithfully) and the signature:

Yours faithfully,
Messrs Atma Ram & Co
(Signature)
V.M. Sinha, Manager

Enclosures

An indication of the enclosure(s), if any, is given on the letter itself on the left side at the bottom. Both 'Encl' and 'Enc' can be used as abbreviations. One may either give a description of the enclosure(s) or its/their number.

The Address on the Envelope

The address on the envelope should be written/typed as legibly and completely as possible. It is always desirable to mention the PIN or the Zip Code to facilitate delivery. The word 'Messrs' need not be put before the name of the firm when writing to a limited company. However, it must be put when writing to a partnership.

SUPER COMPUTER

Unbelievable feats by computers have become so frequent an occurrence in this high technology era that new breakthroughs in computer technology have ceased to astound. Twelve hundred pages of a multi-volume encyclopaedia per second and the new Series 39 mainframe computer was through with its entire contents in three minutes flat. Launched by the London-based International Computers Ltd (ICL), it is a combination of British computer design expertise and fibre optic technologies with the chip technology from Fujitsu of Japan.

Claimed to be the fastest in the world, the fibre optic system will enable the new computer to link users across the world. To top it all, despite its enormous computing power, the smallest unit occupies less than a cubic metre of space, and it is the first highpowered machine which can be used in an office without its own air-conditioning system.

MASTERING THE VOID-2

... with satellites. In this second and concluding part on them, an outline of their unimaginably multi-faceted, inter-linked systems. Plus two at-a-glance information-packed tables.

Communication System

The communication system in a space mission performs three primary functions, viz, telemetry, telecommand and tracking. The information gathered from the experiments, various auxiliary onboard instruments, as well as about the spacecraft functioning itself, is normally processed suitably and transmitted to a ground station via the satellite telemetry.

The telecommand system enables exercising control on the spacecraft from a ground station. Operations such as putting the spacecraft in different functional modes and correcting in-orbit anomalies are carried out using this system. The determination of the location of the satellite at different times during its orbital motion is made possible by the tracking system.

Attitude Control & Sensors System

Attitude control of a spacecraft is the orientation of the satellite fixed axes with respect to a desired reference frame, thereby providing the necessary alignment for the operation of payloads, sensors, antenna and even solar panels. The relevant information about the attitude is generated by a system of sensors that sense the directions of certain well known landmarks in space such as the sun, the earth's magnetic field, the infrared horizon

of the earth or some bright stars.

Once the design goals are laid down, there are at least four major elements in the design of a control system for a spacecraft. These include mission analysis, dynamic and reliability analysis, hardware implementation and finally testing and design evaluation.

In the mission analysis phase, the overall mission profile vis-a-vis the attitude control requirements are examined. The availability of the ground support facilities and the interfaces between the onboard and the ground systems are additional considerations in the mission analysis.

Dynamics analysis is carried out for various control modes, ensuring stability for all possible mass distributions and flexibilities as well as disturbances such as gravity gradient, magnetic, solar radiation, aerodynamic and those arising from the operation of the onboard hardware. Stability analysis is done for all possible modes including transition modes from one phase to another.

The implementation of an attitude control system has several approaches that

SCIENTIFIC SATELLITES

Sl. No.	Name	Country/organisation	Launch date	Sl. No.	Name	Country/organisation	Launch date	Sl. No.	Name	Country/organisation	Launch Date
1.	Pioneers 1-11	USA	Aug 17, 1958 to Apr 5, 1973	15.	Helios 1	West Germany	Dec 10, 1974		Lab H		
2.	Orbiting Solar Observatory OSO 1-8	USA	Mar 7, 1962 to Jun 21, 1975	16.	Aryabhata	India	Apr 19, 1975		British Science & Engineering Research Council		
3.	COSMOS 1-561	USA	Mar 16, 1962 to May 25, 1973	17.	High Energy Astronomy Observatory HEAO 1-3	USA	Aug 12, 1977	27.	Amptex/CCE/IRM	SERC/NASA	August 1984
4.	Orbiting Geophysical Observatory OGO 1-6	USA	Sep 4, 1964 to Jun 5, 1969	18.	Goes 1 & 2	European Space Agency	Apr 20, 1977 & Jul 14, 1978	28.	Giotto	European Space Agency	July - August 1985
5.	Elektron 1-4	USA	Jan 30, 1964 to Jul 1, 1964	19.	Hakuchō	Japan	Feb 21, 1979	29.	Space Telescope	NASA with an European Space Agency share	Space Shuttle April 1985
6.	Pegasus 1-3	USA	Feb 16, 1965 to Jul 30, 1965	20.	Bhaskara	India	Jun 7, 1979	30.	Viking	Sweden	Arane 2 or 3 Jan 1985
7.	Orbiting Astronomical Observatory	USA	Apr 8, 1966 to Aug 21, 1972	21.	Solar Maximum Mission (SMM)	USA	Feb 14, 1980	31.	Galileo	NASA	May 1986
8.	Diapason 1 & 2	France	8 Feb 1967 & 15 Feb 1967	22.	Voyager 1 & 2	NASA	Voyager 1 on Sep 5, 1977 & Voyager 2 on Aug 20, 1977	32.	Hipparcos	European Space Agency	Arane 2 or 3 in 1986
9.	ESRO 2A, 2B, 1A and 1B	European Space Agency	May 29, 1967 to Oct 1, 1969	23.	ISEE	NASA	Delta from Cape Canaveral on Aug 12, 1978	33.	ISPM	European Space Agency & NASA	Shuttle in May 1986
10.	Shinsei	Japan	Sep 28, 1971	24.	ISO	European Space Agency	Arane from Kourou in late 1980's or early 1990's	34.	ROSAT	West Germany	Shuttle in July 1987
11.	Aeros 1	FRG	Dec 16, 1972	25.	Exo Sat	European Space Agency	Late May 1983	35.	Gamma Ray Observatory	USA	Shuttle in March 1988
12.	Prognoz 1-7	USA	Apr 14, 1972 to Oct 30, 1978	26.	IRAS	NASA, Netherlands Aerospace	Jan 26, 1983				
13.	ESRO 4	European Space Agency	Nov 22, 1972								
14.	ANS 1	Netherlands	Aug 30, 1974								

SOME COMMUNICATIONS SATELLITES

Sl. No	Name	Country/Organisation	Launch Place	Launch Date	Sl. No	Name	Country/Organisation	Launch Place	Launch Date
1.	INTELSAT	INTELSAT	Cape Canaveral	INTELSAT IV F1 May 1975; F6 Feb. 1975; F8 Nov. 1985; INTELSAT IVA-F1 Sep. 1975; F2 Jan. 1976; F3 Jan. 1978	9	ECS	Eutelsat	Kourou	D4 Feb 21, 1981 ECSI Jun 1983 & ECS2 Mar. 1984; ECS3 Feb 1985
2	SATCOM	USA	Cape Canaveral	SATCOM 1 & 2 Dec 12, 1975 & Mar 26, 1976	10.	GALAXY	USA	Cape Canaveral	Galaxy 1 Jun 1983 & Galaxy II Sep 1983
3.	MARISAT	USA	Cape Canaveral	MARISAT F1 Feb 19, 1976 F2 Oct 14, 1976 F3 Jun 9, 1976	11	TELSTAR 3	USA		TELSTAR 3A & 3B in Jul 83 & early 1984
4	PALAPA	Indonesia	Cape Canaveral	Palapa 1 & 2 Jul 8, 1976 & May 10, 1977 respectively	12.	TDRS	USA		TDRS A Apr 14, 1983 TDRS B Aug 1983 TDRS C Mar 1984
5.	BSE	Japan	Cape Canaveral	April 17, 1978	13.	BS2	Japan	Tanegashima	
6	ANIK	Canada	Cape Canaveral	Anik B Dec 15 1978, Anik D Aug 26, 1982, Anik C3 Nov 11, 1982	14.	ARABSAT	Arab Satellite Organisation	Kourou	ARABSAT 1 Jul 1984 Arabsat 2 Oct 1984
7	INTELSAT V	INTELSAT	Cape Canaveral	INTELSAT V F2 Dec 6, 1980; F1 May 23, 1981; F3 Dec 15, 1981; F4 Mar 1982; F5 Oct 1982; F6 Jun 1983	15.	GSTAR	GTE Satellite	Kourou	GSTAR-1 May 1984 GSTAR-2 Aug 1984
8	COMSTAR	USA	Cape Canaveral	COMSTAR D1 May 13, 1976 COSMSTAR D2 Jul 22, 1976 COMSTAR D3 Jul 29, 1978 COMSTAR	16.	TELECOM 1	France		TELECOM 1A May 1984 & TELCOM 1B Sep/Nov 84
					17.	IIIHUICA	Mexico	Kennedy Space Centre	May-Sep 1985
					18.	INTELSAT VI	INTELSAT		First flight due early 1986
					19.	UNISAT	USA		Ariane or Shuttle during 1986
					20.	ITALSAT	Italy		Due in last quarter of 1987
					21.	MARECS	INMARSAT	Kourou	
					22.	INSAT-1A	India	Kennedy Space Centre	Apr 10, 1982
					23.	INSAT-1B	India	Kennedy Space Centre	Aug 30, 1983

can be broadly classified as passive, semi-passive, active and hybrid.

The passive system controls the attitude of a spacecraft by employing elements that primarily depend on inertial torques or external forces for their operation. The simplest method of realising a passive stabilisation is by spinning the satellite about its axis of the greatest moment of inertia. To damp out the undesired nutational motion arising from magnetic, gravitational, solar and aerodynamic torques, a nutation damper is usually employed.

A third approach is to use the gravity gradient torques arising from small, but finite, difference in the strength of the earth's gravitational field which occurs over the finite spatial extent of the satellite.

There are three major types of active system, cold gas, hydrazine or electrically-first system called the mass expulsion system cold gas, hydrazine or electrically-charged particles are expelled at definite velocities to produce the required control torque in the satellite. A set of 12 thrusters is normally employed, four about each axis to result in positive or negative torques.

The second approach to active control involves the use of reaction wheel sys-

tems. In the third approach, gyrotorquers are used. The fourth aspect of the control system implementation, is the testing and design evaluation.

Life Support Systems

The basic requirement of the life support system is to provide a controlled and physiologically acceptable environment for the crew during all phases of a mission which may include launch, orbital flight, entry and post landing. The system must provide for a pressurised shirt sleeve environment for pressure suit operation during normal and emergency conditions and for food, water and waste management functions. The system should also disperse the electronic equipment heat loads to keep the environment temperature within habitable limits. The parameters that constitute the principal design criteria are: mission duration, operational modes, crew size, cabin total pressure, cabin leakage rates, power level of electrical and electronic equipment located in the cabin and type and weight of secondary power system, crew metabolic rates and environmental requirements are also important determinants in defining the life support system.

Satellite Payload

The setting of the goals for space mission enables it to proceed with the next step of identifying the payloads, the orbit choice and mission life. Depending on the type of satellite, the payloads are conceived keeping in view the application of the satellite

The payload interfacing, in general, involves the following major elements. They include physical characteristics, resources required, environmental factors, mission factors and the electromagnetic compatibility. The physical characteristics are the weight, volume and shape of the payload. Resources include the specification of size and skill of the crew, average and peak electrical power, data handling needs, heat rejection as well as control panel and display requirements. A variety of environmental factors are to be considered which include acceleration, shock vibration, etc. during launch and re-entry, and temperature conditions in the orbit phase. Safety considerations, pre-launch access, orbit characteristics, etc. come under the category of mission factors.

(To be continued)

CAREER COUNSELLING

BY G. J. UNNITHAN, Director, Students Advisory Bureau, University of Rajasthan

Please give me detailed information on the Indian Institute of Packaging, Bombay.

Jagdish, Maheshwari

The Head Office of the Indian Institute of Packaging is situated at E-2 Marol Industrial Estate, Andheri (East), Bombay-400 093. It is concerned with the improvement of the standards of packaging needed for the promotion of exports of consumer and industrial products. As part of its activities, the institute conducts a full-time, non-residential training programme of three months. Graduates in Science/Technology/Economics/Commerce/Mathematics/Engineering diploma holders preferably with three years' experience and sponsored by related industries, are eligible for the course. An exhaustive syllabus of 16 papers, practical orientation and project studies and reports are prescribed for the course.

In which university can I study a one-year M.A. course as a private candidate?

A.K. Sinha, Lucknow

The facility of studying privately or by correspondence, for a one-year M.A. course does not exist.

Kindly provide details about the courses conducted in the Patel Institute of Political Science and Tata Institute of Social Sciences and their addresses for further communication.

Debajit Bora, Guwahati

The Sardar Patel Institute of Economics and Social Research (Post Box 4062, Navrangpura, Ahmedabad-380 009) is basically a research institute and is affiliated to Gujarat University for the Ph.D. degree. The institute does not conduct post-graduate courses. The Tata School of Social Sciences (Deonar, Post Box 8313, Bombay-400 088) conducts an M.A. course in Social Work with specialisation in (i) Criminology & Correctional Administration; (ii) Family and Child Welfare; (iii) Medical and Psychiatric Social Work; (iv) Social Welfare Administration; (v) Urban and Rural Community Development and

an M.A. course in Personnel Management and Industrial Relations. The school also conducts a full-time post-graduate certificate course in research methodology, part-time certificate courses in (i) Hospital Administration and (ii) Personnel Management, besides M. Phil and Ph.D. courses. Admission to the M.A. course in Social Work is open to degree holders with 45%. For the M.A. course in Personnel Management, a bachelor's degree with 50% (in Science 55%) is required. Admissions are announced in May and the entrance test is held in June.

I have studied upto H.Sc. (Commerce) from Pune Board and am now employed in Bombay Municipal Corporation as a stenographer. I do not want to waste three years in pursuing a graduation course in Commerce. Is there any course for furthering my prospects in my job?

P. Sheela, Bombay

Many stenographers have risen to positions of eminence through hard work, understanding of office procedures and further training. Your prospects would be brighter if you could take a degree. If you have completed three years after your Higher Secondary examination, you can appear for all the papers of the degree exam in one year from Osmania University.

I am doing postgraduation (second year) in Agricultural Economics. What are the job opportunities open to me? Are there any scholarships available from foreign universities for research work?

Renuka Nair, Trichur

Agricultural Economics is an important applied subject in the Indian context. It covers farm management and production, resource economics, agricultural marketing and prices, finance, cooperation, policy administration, development and international economics. Employment will be mainly in public sector organisations/companies, government agricultural departments, co-operatives, banks and other financial institutions, research institutions and teaching, IES, IAS, etc. A limited number of scholarships for further research in India and abroad are available.

I would like to have the following information regarding the Civil Services. Is stammering a disability in the interview? Can separate mediums be

used for both the optionals in the main exam? Which language is used by the interview board?

Delbir Gehlaut, Delhi

(i) Stammering is a disability because the medical rules prescribe that speech should be without impediment. The medical board will consider this disability and certify whether or not it is likely to interfere with the efficient performance of the duties required of the candidate. (ii) Hindi or English may be used in the different papers, but only one medium is to be used in a particular paper. (iii) The preference of the candidate is often taken into account.

I would like to know whether being a 'B' or a 'C' certificate holder in the Naval Wing of the National Cadet Corps (NCC) helps in any way in the T.S. Rajendra examinations.

Manish Joshi, Nainital

No special concessions are given to NCC cadets at the time of admission to the T.S. Rajendra/DMET.

I am on the verge of getting an appointment in one of the government offices. Please tell me whether I can continue my studies as a second year student through correspondence course.

S. Gopal, Madras

Most universities have provision for admitting eligible students to the second year of undergraduate courses, and also correspondence courses. You may make enquiries from the directors of correspondence courses of the universities of Andhra (Waltair), Annamalai (Annamalainagar), Madras and Madurai respectively, which are in your neighbourhood. ■

NOTE TO READERS

Before rushing in your career problem, check if it can be solved by looking up our sections on *Careers* or *Career Counselling* in the earlier issues. Space is limited; the mail received staggering. Letters chosen are those of general interest or in particular cases where the information is hard to find or has not been published before. Many readers ask for a personal reply. Sorry, this is not possible. So please don't send postage or envelopes. Make your queries specific and brief. Send them to Career Counselling, Career & Competition Times, 10 Daryaganj, New Delhi-110 002. Your letters should be accompanied by the coupon.

A CLARIFICATION

In reply to the query of **Surindra Jain** (Guwahati) in *Career Counselling* (Aug. '85), it was mentioned that it is possible to do B.Com. while undergoing articlership of a Chartered Accountant. But effective from April 1985, to be eligible for the C.A. course, graduation is compulsory.



OH, CALCUTTA.

As the early shade of a misty dawn lifts its veil to embrace the first lights of the morning, the river Hooghly is set ablaze in a golden radiance. Suspended across its banks lies the amazing network of the Howrah Bridge—India's only cantilever bridge, and an engineering feat of the finest metal and mettle. The massive thoroughfare takes the visitor from the Howrah Station to the portals of a giant city waking to life amid twitters of swallows and din of traffic. It is Calcutta—the City of Palaces'.

Or so we were taught in school. Today Calcutta is a city of paradoxes where palaces co-exist with potholes! With a staggering population of 10.2m, West Bengal's capital remains one of the country's most populous urban concentrations epitomising all that is splendid and all that is squalid about urban India. Here, the architectural splendour of the Victoria Memorial and the majesty of the Raj Bhawan are set against the world's most noxious slums and wretched pavement hovels. Here, antiquated trams, relics of British India, run alongside the Metro trains—Calcutta's latest technological marvel! It is here that the commercial centres of Chowringhee uphold the rule of *laissez faire* under the very nose of a Marxist Government! The city's contours revealing a curious blend of the high and the low, the posh and the putrid, symbolise the vicissitudes of Calcutta.

Calcutta's history

One must go back a long way through the corridors of time to recount the history of Calcutta which has recently celebrated its 295th birth anniversary. It was on the fateful day of Aug 24, 1690 when Job Charnock, 'The East India Company's agent', set foot on the banks of the Hooghly and hoisted the British flag there. Later, in 1698 Charnock purchased the three villages of Sutanutty, Gobindapur and Kalikata from Osman, the grandson of Emperor Alamgir, "at a grand sum of Rs 16,000". Thus, it is from this cluster of villages that Calcutta, the erstwhile commercial and political capital of British India, was born. Interestingly, St Petersburg was founded by Peter the Great at the same time. And both the cities were destined to be the capitals of two mighty empires over which, as it was once believed, the proverbial sun would never set.

Even 150 years back Calcutta was a place of "mists, alligators and wild beasts", and a "receptacle of squalor and dirt" which perhaps prompted the poet Ishwar Chander Gupta to

write in 1822:

"Pestered by the fly whole day and plagued by the mosquito at night,
Such is the Calcuttan's plight."

Today, the situation hasn't changed much. Calcutta is now a city steeped in gloom—a soot and concrete jungle of pollution, power-cuts and poverty. The story of disintegration is sadly written on the walls of many of its monuments which are now in ruins. Calcutta High Court, one of the oldest court buildings in Asia, and some of the historic structures in Dalhousie Square (now named Benoy Badal Dinesh Bag) are yielding place to mushroom growths of modern office buildings. The old Imperial General Post Office, with its exotic silver dome and its neo-classical columns, shows tell-tale marks of disfigurement.

India's 'cultural capital'

Even as darkness broods over every corner, Calcutta continues to throb with a rich tradition and creative vitality that have made it India's 'cultural capital'. One can discover the imprints of Calcutta's culture in the half-finished images of Goddess Durga at Kurnartuli, in the bewitching melody of its *rabindrasangeet*, or in the rounded symmetry of its sweet and succulent *rossogollas*. A curious eye will discern a

Image of a dying city.



remarkable synthesis of various cultures in the varied designs of Calcutta's buildings. The turn-of-the-century Hindu mansions of Shambazar, the ornate buildings of Marwaris at Burabazar, the distinctive Anglo Indian houses of Park Street, the Muslim houses of Rajabazar and those of the Chinese at China Town form a fascinating mosaic.

Calcutta's pavements

Calcutta's footpaths teeming with beggars, hawkers, fortune-tellers, refugees and unemployed youths cut across a wide diversity of the city's populace. Calcutta's hospitality which is inherent in its very culture, provides nightbeds for a massive 10 lakh pavement dwellers. A recent ISI survey reveals that 50% of Calcutta's footpath dwellers earn enough for two meals every day. It has also been found that 64% of these people were permanent migrants, 19.9% came from Bihar, 6.5% were refugees from Bangladesh, and the rest migrated from various other states of India. It is also estimated that 86.7% of these people flocked to the city because of sheer poverty. The figures will partly explain the severe economic and civic crises of Calcutta today.

A sporty city

Of the many things that Calcuttans are proud of, football is certainly one. Calcutta's Maidan is the nursery of budding footballers. Football is not only Calcutta's major source of entertainment, it is an infatuation that grips the entire city. The serpentine queues at ticket counters, the stampede in the stadia before matches commence, mass adulation of 'football stars', and the frenzy that accompanies a victory celebration of a 'big club', should be seen to be believed. It is not surprising therefore that Mohun Bagan, East Bengal and Mohammedan Sporting—the three giant clubs of Calcutta football have completely dominated the Indian soccer scene for several decades.

A few paces away from the maidan is the legendary Eden Gardens, a name that conjures up memories of many a cricketing battle fought here over the years. It was in 1841 that Lord Auckland created this ground and christened it 'Auckland Circus Garden'. Later, in 1854 he renamed it 'Eden Gardens' to keep alive the memory of his two sisters whose family name was Eden. The concrete coliseum accommodates more than 80,000 which makes it the world's largest cricket stadium after the Melbourne Cricket Ground.

A festive city

'Thirteen festivals in 12 months,' is a well-known Bengali saying. And Calcutta's numerous festivals bear testimony to this. On



Refugees from Bangladesh on a Calcutta footpath.

the very first day of *Beishakh* the Calcuttans usher in their *naba barsha* (the Bengali New Year's Day) with mangoes, jackfruits, new account books, *panjikas* or almanacs and their traditional pomp and gaiety. Even before the New Year spirit has died down comes 25th *Beishakh*—the day Tagore was born. Calcuttans pay their homage to 'Gurudev' on this memorable day with songs, recitals and dance-dramas from his works. Infact, Rabindranath Tagore has been so much a part of Calcutta's life that the city has named after him a university (Rabindra Bharati University), a cultural centre (Rabindra Sadan), a street (Rabindra Sarani), a lake (Rabindra Sarobar), and the famous Howrah Bridge (now called Rabindra Setu). In the month of *Jeisthe*, on the occasion of *Jameishasthi*, Bengali bridegrooms clad in their spotless *dhoti* and *panjabi* make for their mothers-in-laws' houses where they are sumptuously treated. Come October, and Calcutta dresses up for the much awaited *pujas*. Glittering streetlights, overcrowded *pandals*, new clothes, fire-crackers, microphones blaring out *puja* numbers—all these have become integral

features of the city's *puja* celebrations. Durga Puja, Lakshmi Puja, Kali Puja, Dipabali Bhratrid-witiya (Brothers' Day), Saraswati Puja—the annual celebrations go on, unceasing in spirit, and each adding its characteristic flavour to Calcutta's *joie de vivre*.

The city's attractions

As the first capital of modern India, before Delhi was made the Imperial Capital in 1911, Calcutta is the focal point of a huge network of transport and communication including a great seaport and a modern airport which makes it a convenient tourist resort. Calcutta's monuments with their rich historical associations are obvious attractions for most tourists. Fort William, Victoria Memorial Hall, and the Indian Museum will take one through the dim vistas of Calcutta's history. The National Library with its palatial building in the Italian renaissance style of architecture, the Writer's Building with its imposing edifice of Gothic architecture and the 109-year-old New Market, with its bricked towers and angular roofs will draw the viewer's attention. The Asiatic Society, one of the ancient literary and scientific societies of the East, is situated at the junction of Park Street and Chowringhee. Established on Jan 15, 1784, the society had luminaries like Sir William Jones as its president and Warren Hastings as its patron. The Academy of Fine Arts,

Bangiya Sahitya Parishad, Birla Academy of Art and Culture are some of the well known cultural establishments. The home of Ramkrishna Paramhansa and his illustrious disciple Swami Vivekananda, can make Calcutta boast of a rich spiritual heritage. Dakshineswar Kali Temple and Belur Math draw pilgrims from all over the world. Besides, Botanical Gardens at Sibpur, Zoological Gardens of Alipur, St. Paul's Cathedral, Birla Planetarium, Paresnath Temple, Nakhoda Mosque, Mahajati Sadan and Marble Palace are some of the major tourist spots, spread over the city.

Resting beside the Sahid Minar bathed in the crimson light of the setting sun, the weary traveller will discover a dark anonymity slowly engulfing Calcutta's skyline. The imposing minar will remind him of the 'golden days' when Calcutta was the nerve-centre of Bengal's Swadeshi Movement and the 'prized possession' of the British imperialists. Today, the old glitter has gone, but the glow still remains. While ecologists proclaim the city 'dead', Calcutta lives on with her songs and dances, her theatres and her poetry that remind us of Tagore's lines in *Palatake*:

"Always I hear, 'gone away, gone away'
Never say, 'she is gone',
It is a lie, I cannot bear it."

Debashis Chatterjee, Calcutta

CALCUTTA'S VITAL STATISTICS

● **Calcutta's demographic profile**

Population of metropolitan Calcutta: 10.2m
Density of population: 31,651 people per sq km (1981 census)

Growth rate within Corporation Territory: 4.5% (1971-81)

Number of people living in slums or *bustees*: 30 lakhs

Every third person of Calcutta is a slum dweller as against every fourth in Delhi and every fifth in Bombay.

● **Calcutta's transport**

Number of passenger vehicles: Taxis-11, 988; Auto-rickshaws-428; Trams-430; Private Buses-3641; State buses-1449 (December 1984 figures)

Average speed of traffic: 8 km/hour

Volume of cargo handled at Calcutta port: 11.6m tonnes. (1984-85)

Volume of cargo handled at Calcutta airport: 27,348 tonnes (1984).

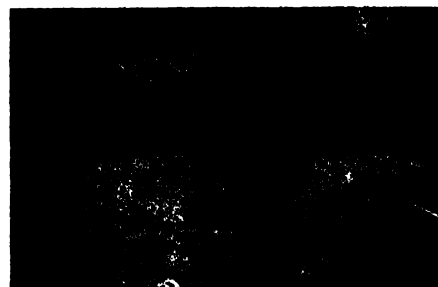
● **Calcutta's streets**

Of the city's 37 square mile area the streets occupy a length of about 520 miles encompassing only 6.3% of the surface lands. This is way below the international standard of 25%-30%, which is the optimum road surface.

Teletype: On an average 18,000 telephones of Calcutta always remain out of order!

D.C., Calcutta;

THE STORY OF MONOPOLY



Millions of dollars have been won and lost over it in a few short hours. It has landed people in jail and forced them into bankruptcy, with no choice but to turn all of their assets over to a merciless landlord. People have met, fallen in love and married over it—and who knows how many arguments it has caused?

It, of course, is *Monopoly*, Parker Brothers' Real Estate Trading Game, probably the most famous proprietary board game in the world. Who could fail to recognise the origin of that familiar imperative—"Pass Go, Collect \$200"? And where else but in a *Monopoly* game would going to jail be a welcome respite from an exorbitant rent bill?

Since it first went on the market in 1935, over 80m *Monopoly* sets have been sold worldwide, and it is now played by an estimated 250m people. Parker Brothers is undoubtedly the largest 'housing developer' in the world—they've 'constructed' over 2,560,000,000 little green houses in 44 years.

Monopoly is a game that lends itself to zany events and is even a tournament sport. And, just as with any other fiercely competitive sport, it has its physical hazards comparable to tennis

elbow or runner's toe. '*Monopoly* knees' is the acute syndrome that sets in after sitting cross-legged for a four-hour match.

A Marathon Event

But many players are not content with buying and selling, wheeling and dealing in the comfort of their own living rooms. For some reason, the game's fanatics feel compelled to play their game in treehouses, in bathtubs, elevators, underground, underwater, even on balance beams. Records have been documented not only by Parker Brothers, but also by the *Guinness Book Of World Records* for extraordinary *Monopoly* events. There's the longest game played in a moving elevator (16 days), in a bathtub (99 hours), the longest anti-gravitational game (played on a ceiling for 36 hours). The current world record for the longest game ever is held by the McCluer North Games Club in Foorissant, Missouri, USA—played for 1,416 hours, or 59 days straight.

The largest *Monopoly* game took place in April 1967, at Juniata College in Huntington, Pennsylvania, USA. The playing board was laid out on an area larger than a city block, using campus streets and sidewalks. The dice were large foam rubber cubes cast from a third floor fire escape and players were informed on their moves by messengers on bicycles equipped with walkie-talkies.

One of the most exotic *Monopoly* playing marathons was held in 1976 when the Lodi California Diving School played for 1,008 hours—underwater. 140 people in wet suits played in two-hour relays during 42 days of unbroken play. However, this wasn't the first underwater *Monopoly* game ever played. In 1967, Parker Brothers' engineers designed a special waterproof set—the board weighs 95

Iba is backed with steel and laminated with cellophane. The Title Deed, Chance and Community Chest cards are also sandwiched to metal and laminated with cellophane, and the houses and hotels are filled with steel wool. The set is so popular, it barely has time to dry off between games.

Parker Brothers seems to be endlessly patient with prospective record-breakers whose sanity the layman would regard with suspicion. In 1961 students at the University of Pittsburgh, USA, in the midst of a 161-hour marathon, discovered that the Bank lacked sufficient funds to continue. Faced with impending Depression, or worse, the end of the game, the players wired an urgent request to Parker Brothers for one million dollars. The company, which prints more money than the US mint each year, responded with style. They sent a million dollars of *Monopoly* money to Pittsburgh by plane and wired Brink's Armored Car Service to meet the plane at the airport. The money was taken to the depleted Bank under armed guard.

Monopoly And Atlantic City

All of the above happenings place *Monopoly* in a class by itself, but it took an event which made national headlines to prove the point once and for all. In September 1972, a simple proposal by the Atlantic City Commissioner of Public Works threatened to rock

the foundations of the *Monopoly*-playing world. A campaign to give the city a new image included a suggestion to change the name of Baltic and Mediterranean Avenues.

The storm of protest resulting from such 'heresy' was overwhelming. Hundreds of letters, telegrams and phone calls flooded Parker Brothers offices. Students rallied around the cause, forming committees such as Princeton University's 'Students to Save Baltic and Mediterranean Avenues' (SSBMA) which threatened to flood Atlantic City with *Monopoly* money if the proposal was voted in.

The climax of the controversy occurred on Jan 11, 1973, at a public hearing which the commissioners expected to be a routine matter. They were met by nearly 300 citizens, newsmen and spectators who had gathered to fight "to the death" if necessary.

The five-man commission unanimously agreed to veto the proposal.

The Origins

Monopoly was first brought to Parker Brothers in 1934 by Charles B. Darrow of Germantown, Pennsylvania. At the end of the initial play test by Parker Brothers executives, however, the game was unanimously turned down. It took too long to play, the rules were too complicated, and players kept going round and round the board instead of ending up at a final goal. Advised that the game contained 52 fundamental playing errors, Darrow proceeded on his own. When reports of the game's success began to reach Parker Brothers, the company bought the rights in 1935.

Monopoly was the biggest thing that had ever hit Parker Brothers. Sales of the game skyrocketed and by mid-February, the plant

was producing 20,000 sets a week. Before Christmas, so many telegraphed orders had poured in that they were filed in huge laundry baskets and stacked in the hallways. Faced with an ever-increasing backlog of requests, a book-keeping firm in Boston was called in to help with the mountain of clerical work. The firm's representatives took one look and refused the job at any price.

Despite the initial enthusiastic reaction to the game, the company viewed *Monopoly* as a fad game for adults that would sell well only for about three years. Certainly it was too complicated for children to play. And just as expected sales soon began to level off. But then, suddenly, sales went up again, and the upward spiral has continued ever since. Parents taught the game to their children, and so on, making it the world's most popular board game.

Monopoly Goes Foreign

The popularity of the game soon transcended the boundaries of the US, and it is now published in 28 countries. It's printed in 19 languages, including French, Italian, Spanish, German, Dutch, Flemish, Swedish, Finnish, Indian, Norwegian, Greek, Portuguese, Japanese, Chinese, Arabic, Catalan and Danish. Generally the game is translated into foreign real estate and currency. In England the location is London. Boardwalk and Park Place become Mayfair and Park Lane.

The Soviet Union has banned the game as being "too capitalistic", but there is reason to believe that at least a few Russians have been secretly taking a ride on the Reading. During the American National Exhibition in Moscow in 1959 all six *Monopoly* sets on display disappeared. *Courtesy Parker Brothers*

A BRILLIANT COPY!

The decision of the Information & Broadcasting Minister to promote art films on TV is commendable. *Ek Rooka Hue Feisle* was the second film which was specially produced for TV by well-known director, Basu Chatterji. The film has been liked by all for it has a powerful theme. Twelve jury members decide the fate of a boy who is alleged to have murdered his father. From one not guilty and 11 guilty, the unanimous decision at the end is not guilty. The 12 representatives of society look at the situation from the standpoint of their psychological make-up, shaped by their past experiences in life and society. The picture, in fact, is thought-provoking.

The film does not fit into our set-up because we do not have a jury system. Chatterji could have adapted the story and changed it keeping in view the Indian conditions. It could have been a discussion between a bench of five high court judges who have been influenced by five different value systems or a discussion between a group of enlightened citizens.

Honesty of profession demands that Basu Chatterji should not take credit for at least the theme of this film. The film is a carbon copy of *Twelve Angry Men* directed by Sydney Lumet in which Henry Fonda was the main actor. The situation, the dialogues, the style are the same. Perhaps, only 10% of the dialogues have been changed by the script writer and the director. The style of acting, mannerisms and facial expressions are also similar. Even the rain and electricity light come and go exactly at the same time.

Chatterji could have at least explained the fact that the film was not his original and was based on *Twelve Angry Men* during his interview with Vinod Tewari just before the screening of the film.

Stars And Careers



SAGITTARIUS

If you were born between Nov. 22 and Dec 21 the Sun on your birthday occupied Sagittarius, the ninth sign of the Zodiac. As such Sagittarians are good-natured, generous, judicial, sincere and impartial. They are open and easy-going and possess a friendly nature. They can intuitively guess the truth behind any attempt to deceive them.

Sagittarians are restless, hopeful and enthusiastic. They are usually fond of out-of-door games and exercises. Although they have fantastic retention power, they can forget little things like where they have left their belongings. They are frank and cordial. Sagittarians also possess the natural ability to channelise their energies in the direction of higher or more difficult branches of learning, such as philosophy, theology or law.

They are creative, imaginative and have the potential of becoming inventors or discoverers. Mercury rules the tenth house of the Sagittarian nativity. This implies that all Mercurial professions such as literary work, teaching, audit-

ing, engineering, advertising, publishing, printing, secretarial pursuits, book-selling, stationery business and work in foreign offices would be suitable for them. Jobs entailing frequent travelling and quick changes also appeal to the Sagittarian nature.

Sagittarians are also lovers of nature and have well-developed aesthetic sensibilities. Essentially impulsive by nature they may be prone to bouts of brusqueness once in a while. As a rule, though, they are extremely cordial and dislike any breach of etiquette. Their business acumen ensures financial security for the Sagittarians.

During 1986 Mars will remain in the Sagittarian house of wealth from March to October. This will give Sagittarians success in financial endeavours. However, it is also likely to make them reckless in their expenditure. This tendency should be curbed in order to make best use of the Mars influence. The period between Mar 28 and Oct 8 next year will be good for Sagittarians healthwise too.

Saturn will commence its transit from Sagittarius from Nov 17 for exactly three years. Jupiter too will enter its own sign, Pisces on Feb 20 next. The next two years will therefore be particularly important for Sagittarians, 1986 may provide challenges which if accepted will put Sagittarians right on top in 1987. This period, though not exactly easy-going, is full of promises of success, plenty and prosperity later on. Some notable persons born under this sign are Winston Churchill, John Milton and Pope John XXIII.

Lechman Des Madan, New Delhi

Word Play-4

BY RANI P. SOMAN

J	B	C	E	G	N	A	R	G	A	L
A	S	I	O	L	A	G	M	E	G	L
C	R	Y	R	R	Q	I	L	L	M	J
O	U	A	E	E	N	U	E	O	D	S
B	S	I	M	K	L	A	B	O	I	A
I	P	E	O	A	Z	P	A	B	L	R
A	T	W	T	T	N	L	E	T	C	O
N	S	D	I	R	A	U	R	R	U	G
K	E	N	E	P	A	O	J	V	E	A
S	B	W	L	V	T	C	I	A	K	H
E	U	A	T	N	I	E	S	R	N	T
O	C	A	A	O	T	P	Q	E	S	Y
E	E	C	G	A	N	F	H	I	D	P

How good are you at maths? And at mathematics? For that is what this time's **Word Play** is all about. Hidden in the grid are the names of 22 Maths wizards. They have been set horizontally, vertically or diagonally.

SOLUTIONS

APPERCEPTION TEST-5

The telephone sure rang the right bell in a large number of our readers' minds going by the flood of correct entries that swamped us. But there were many wrong numbers for every one that connected. The trick lay right there in the middle—the stopper on the dial should have been close to '0' rather than '1'.

The ten lucky deservors: 1. Alok Chaturvedi, Hardwar. 2. Kamal Rathi, Nepal. 3. Shikha Sharma, Delhi. 4. K. Gomathi Nayagam, Nanguneri (Tamil Nadu). 5. Baljeet Singh, New Delhi. 6. Aika Mishra, Mirzapur (UP). 7. Sujit Dutta, New Delhi. 8. Deepak Kumar, Mittal, Meerut. 9. Manish Sinha, Hazaribag. 10. Jyotsnalatha Subramaniam, Kodambakkam, Madras.

Prizes awarded by

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WORD PLAY-2

1. Madras.
2. Jaipur
3. Hyderabad
4. Gangtok
5. Kohima
6. Trivandrum
7. Calcutta
8. Chandigarh
9. Bhubaneswar
10. Ahmedabad
11. Bangalore
12. Agartala
13. Lucknow
14. Bombay
15. Patna
16. Simla
17. The Union territory was Mizoram.

First Prize (all-correct) 1. S. Mahipal Reddy, Hyderabad. 2. Pankaj Joshi, Nainital.

Cancellation Prize (all-correct) 1. Anwar-ul-Haq, Sringeri. 2. Anima Talukder, Durgapur. 3. Prashant Mishra, Allahabad. 4. Subarn Shrestha, Bhaktapur (Nepal). 5. M.G. Sreenivasulu, Kumool (Andhra Pradesh).

forwards or backwards. No letter has been used more than once. To help you solve this complex mathematical problem, here are some clues:

1. He can't set theories.
2. He's a man of letters.
3. He was the prince of Mathematics.
4. Cain's brother?
5. He had mean values in life.
6. He's the moving one.
7. The inventor of logarithms.
8. He calculated pies without circles.
9. He went places in celestial mechanics.
10. He developed the geometry of numbers.
11. The new man who played games.
12. She competes with computers.
13. A great German algebrist.
14. He had a tough time discovering 15 talents.
15. A famous Indian mathematician.
16. He stood out like eucalyptus among lines, points and planes.
17. He did group work to solve algebraic equations.
18. A branch of Algebra is named after him.
19. He found the right angle to view triangular relations.
20. He was destined to bring coordinate geometry into existence.
21. He had the last theorem.
22. He put the planets in motion.

Prizes awarded by

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In **Word Play-2** (CCTimes, Oct '85) a part of the clue—Indian state capitals—was inadvertently omitted. However, even those entries which mentioned just the names of the states were considered for the prizes.

HOW TO ENTER

● Print the answers neatly in capital letters alongwith your name, age and address. Each **Word Play** and **Apperception** entry must be written only on postcards.

● You may send in any number of entries, but each must be numbered accordingly and accompanied by its respective **COUPON**.

● Though all your entries will be included in the draw of lots, you will be entitled to only one prize—the highest in case you're getting more than one.

Closing date for the contests: December 25.

Address your entries to: The Editor, Career & Competition Times, 10 Daryaganj, New Delhi-110 002.

Solutions in February.

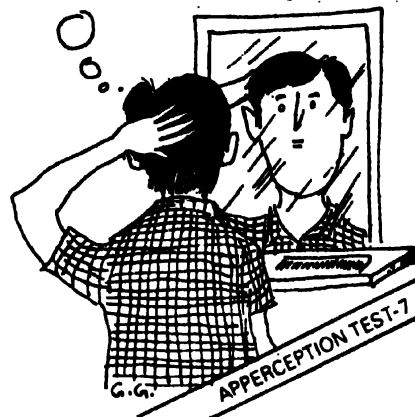
PRIZES

WORD PLAY-4

2 First Prizes

Jack Higgins' *Confessions*, Desmond Bagley's *Juggernaut* and Robin Cook's *Mind Bend* from **Rupa & Co., New Delhi** to the first two **all-correct** entries (**one-error** entries if there are no **all-corrects**) pulled out of the hat. **Plus 5 Cancellation Prizes**—Desmond

OBSERVE & DESERVE



HAIR-RAISER

His own face seems to have this young man baffled. If you can scratch your head a bit and peer through this GAJWANI handiwork, you will understand his bewilderment.

Bagley's *Night Of Error* from **Rupa & Co.**

APPERCEPTION TEST-7:

10 First Prizes

An exciting package from **Rupa & Co., New Delhi** to the **correct** entries pulled out of the hat.

RIGHT TO CHOOSE

Over the last few months, Doordarshan has been televising a variety of sponsored programmes and TV serials. Of late, however, several programmes chosen at random have been discontinued with scant respect for public demand. Popular programmes like *Idher Udher*, *Mashoor Meher*, *Ados Pedos*, *Berrister Vinod*, *Show Theme*, *Mr Ye Mrs. Paying Guest* and *Netkhet Nered* bear ample testimony to this fact.

And very soon the axe is going to fall on the most popular family serial *Hum Log*, the first soap opera in India, which has had its marathon run for more than a year. The first wholly-indigenised serial, *Hum Log* invited viewers' responses to the extent that its story too became subject to the whims and fancies of the watching public. The type of two-way communication it started between the government and the masses is unprecedented in the history of Indian TV.

Do you want this serial to continue or would you rather see it wound up? We believe the viewers have a right to select the programmes they want to see. Write in your frank opinions to V.N. Gadgil, Minister of Information & Broadcasting, and address them to Career & Competition Times, 10 Daryaganj New Delhi-110 002. Last date for receiving entries is Dec. 10, 1985. Your entries will be forwarded to the minister.

Word Play
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Booktalk

TRIPLE DEAL

T rue to their blockbuster tradition, Robin Cook, Jack Higgins and Desmond Bagley have each churned out yet another exciting thriller—*Mindbend*, *Confessional* and *Juggernaut*. And once again the authors establish their reputations as masters of excellence of suspense fiction. Whirlwind paced, action-packed and immensely entertaining, these best-sellers are compulsive page-turners. Yet this is where the similarity ends. For the plots are entirely different as are the inimitable styles of the writers.

Robin Cook's *Mindbend* is a classic of medical horror. And like his other novels, *Come* and *Brain*, it explores yet another frightening plausibility in the world of medicine. It is precisely this element which lends Cook's novels a credibility seldom associated with works of fiction. In fact, through his books, Cook voices his concern over the unethical practices gradually finding their way into the medical profession. *Mindbend* deals with the powerful and unscrupulous influence the drug industry can wield over it. Cook says of this book—"It is my hope that *Mindbend* will help focus public attention. By couching the problem in an emotional framework it brings the process into personal perspective and allows the reader to understand the implications of the situation through identification with the main character.

The story weaves around Adam Schonberg, who, owing to his wife's accidental pregnancy, drops out of medical school and becomes a salesman for a vastly powerful drug concern, Arolen Pharmaceuticals. He detects various dis-

Mindbend by Robin Cook, price Rs 20, pages 368; *Confessional* by Jack Higgins, price Rs 20, pages 256; *Juggernaut* by Desmond Bagley, price Rs 20, pages 320. Published by Rupa & Co., New Delhi.

Cinetalk

A PASSAGE TO INDIA

T he subcontinent emerges from the level of a mere backdrop and grows into a heroically scaled hypnotic central character in David Lean's masterly adaptation of E. M. Forster's classic novel. This brilliant rendering of a literary masterpiece marks the triumphant return of British director David Lean to the screen from a 14-year exile. And in *A Passage To India*, Lean's talents and his consummate mastery of the craft reach their acme.

Bombay, 1920. The brisk morning air is shrill with the tremulous tones of massed brass bands and the steady rap-tap-tap rhythm of marching cavalry. The moment is intense—the Viceroy and his Lady are returning from England. And as they thread through the streets to the heady music of an empire's transitory pomp they pass and blend into the subcontinent's timeless perspectives.

Night: A train puffs and hoots two modest travellers, Adela Quested (Judy Davis) and Mrs Moore (Peggy Ashcroft) to their destination—Chandrapore. Adela appears dull and vapid at

crepancies in its working and investigations lead him on a harrowing trail. Through it he discovers the grisly lengths to which the company can go to persuade doctors to promote its standard drugs.

Confessional by Jack Higgins is a high voltage terrorist drama. Through the gripping, gruesome and yet, surprisingly moving story of an internationally wanted assassin Cuchulain, all set for the biggest kill of his life—Pope John Paul himself—Higgins reveals the shocking history of terrorism and the extent to which powerful nations can go to disrupt world peace. And how harshly they can treat criminals who are a product of their mistakes. Cuchulain is perhaps Higgins's most unusual assassin—intelligent, unscrupulous and cold-bloodedly ruthless and yet compassionate sensitive, gentle and almost lovable. *Confessional* establishes Higgins as a brilliant story teller.

Juggernaut is the second previously unpublished novel of Desmond Bagley, the English writer who created quite a name for himself as an adventure novelist. Set in Nyala, an oil rich West African state the story revolves around a gigantic rig that is longer than a football pitch, weighs a mammoth 550 tons and moves at an average of five miles per hour. This massive Anglo-American convoy is transporting a giant transformer for a multi-national company interested in dabbling its hand in Nyala's fortune of liquid gold—oil. And in the process faces all kinds of tricky situations from bad roads to civil war. Caught in the vortex of a bloody conflict, the huge ungainly juggernaut and its crew brave all odds. From a mobile hospital for the war victims the juggernaut soon becomes a haven for the destitute and a nuisance for the authorities. And finally turns into "a raging brute symbolising destruction." In his lucid manner, Bagley relates an absorbing tale.

On the whole then, these three best sellers could well prove to be virtually unputdownable for those with a taste for adventure and thrill.

J.S., New Delhi

first glance but hidden in her is a tight coil of vivacity and spirit, straining for release in the chugging, rattling train she vaguely dreams of the adventure of discovering what she likes to call the "real India". Outside, the real India broods enigmatically.

Morning, some weeks later: Miss Quested has found her adventure. A young Muslim physician, Dr Aziz (Victor Banerjee), has mounted an excursion to the Marabar Caves in the hills beyond Chandrapore; and to make the English women's first encounter with real India memorable and comfortable, he has organised a huge retinue of servants and an elephant. But even the great beast and the convoy of servants are dwarfed by the featureless rocks that loom over them along the way.

These are awesome images, astonishing images. But their value is not merely pictorial; as they unfold and interlace, they reveal new shades and levels of meaning. Indeed, the central meaning of Lean's *Pessegue*, like in his earlier films, *The Bridge On The River Kwai*, *Lawrence Of Arabia* and *Doctor Zhivago*, is carried by images, and by his manner of juxtaposing them in editing. Like Forster, Lean uses India not just as an exotic setting but as a decisive force in shaping the story, as a reso-

nant symbol: of the unknowable, chaotic universe everyone inhabits; of the unknowable and chaotic inner life that inhabits everyone.

The problem the movie presents to the adapter lies in a trick of design. To sift the meaning of the story from its main narrative line. The narrative is richly peopled with the types Forster encountered during his visits to India. Psychologically, the point on which it is poised is the bottled up emotional tinsiness of Adela. She will have her adventure! She will touch the Indian reality. And she will do so despite the warnings of Ronny, her priggish fiancé. Adela finds in Fielding (James Fox), principal of a local school, a perfect ally for pursuing her elusive quarry—real India. Fox plays the part of a liberal, generous Englishman with skill and an unusual panache.

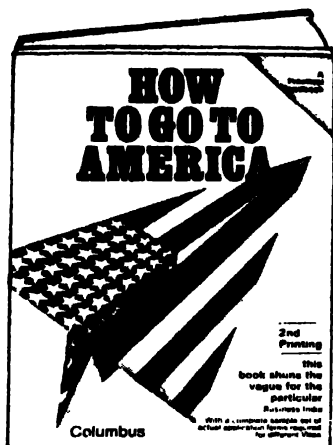
The caves. What actually happens when Adela and Aziz part with the rest to explore the remotest of them? A question which neither Forster nor Lean attempts to answer. All we know—and probably need to know—is that Adela and Aziz after a brief conversation enter different caves. There is a loud echo which frightens and disorients her, and suddenly she is hysterically stumbling down the hill—giving a distinct impression of having been assaulted. Was the whole thing a hallucination or did Aziz follow her and make sexual advances to her—we shall never know though both Forster's and Lean's treatment seems to absolve Aziz. But even after the trial scene culminating in the dramatic moment when Adela recants her accusation, one can never be certain.

Only two characters understand the dreadful disorienting power made manifest by the echo and their answer to it is withdrawal from the world. One is the Hindu scholar Godbole played by the inimitable Alec Guinness. The other is Mrs Moore, Adela's travelling companion, almost comically regal at some moments, uncannily vulnerable at others as Peggy Ashcroft plays her. Mrs Moore enters only one cave, then recoils from it having confronted her own mortality. Later on when people try to draw her back into the middle to testify at Aziz's trial she escapes by booking passage home. "Nothing I say or do will make the slightest difference." Both Godbole and Mrs Moore realise the futility of contemplating the mundane and reasonable when everything is so topsy-turvy.

Echoes, echoes. The critic Lionel Telling described the novel as "a book which is contrived of echoes." And to capture the spiritual essence of the novel the film had to be a thing of echoes—but visual not auditory echoes. The early shots of the great arch and the little train lost in the huge landscape proclaim the film's overarching theme—India as a mysterious and maddening cavern—and then Lean sets the echoes reverberating through them. The moon, first cool and tiny when Mrs Moore meets Aziz, then vanishing completely, reappearing to shed moon light on the fateful voice of the caves, and then suddenly looming large over the shoulder of a forbidding monolith. Then there are the echoes of monkeys and the bouquets. All echoes finally converge on the central theme of the novel which Forster insisted "was not about the incompatibility of east and west but about the difficulty of living in the universe."

S.R., New Delhi

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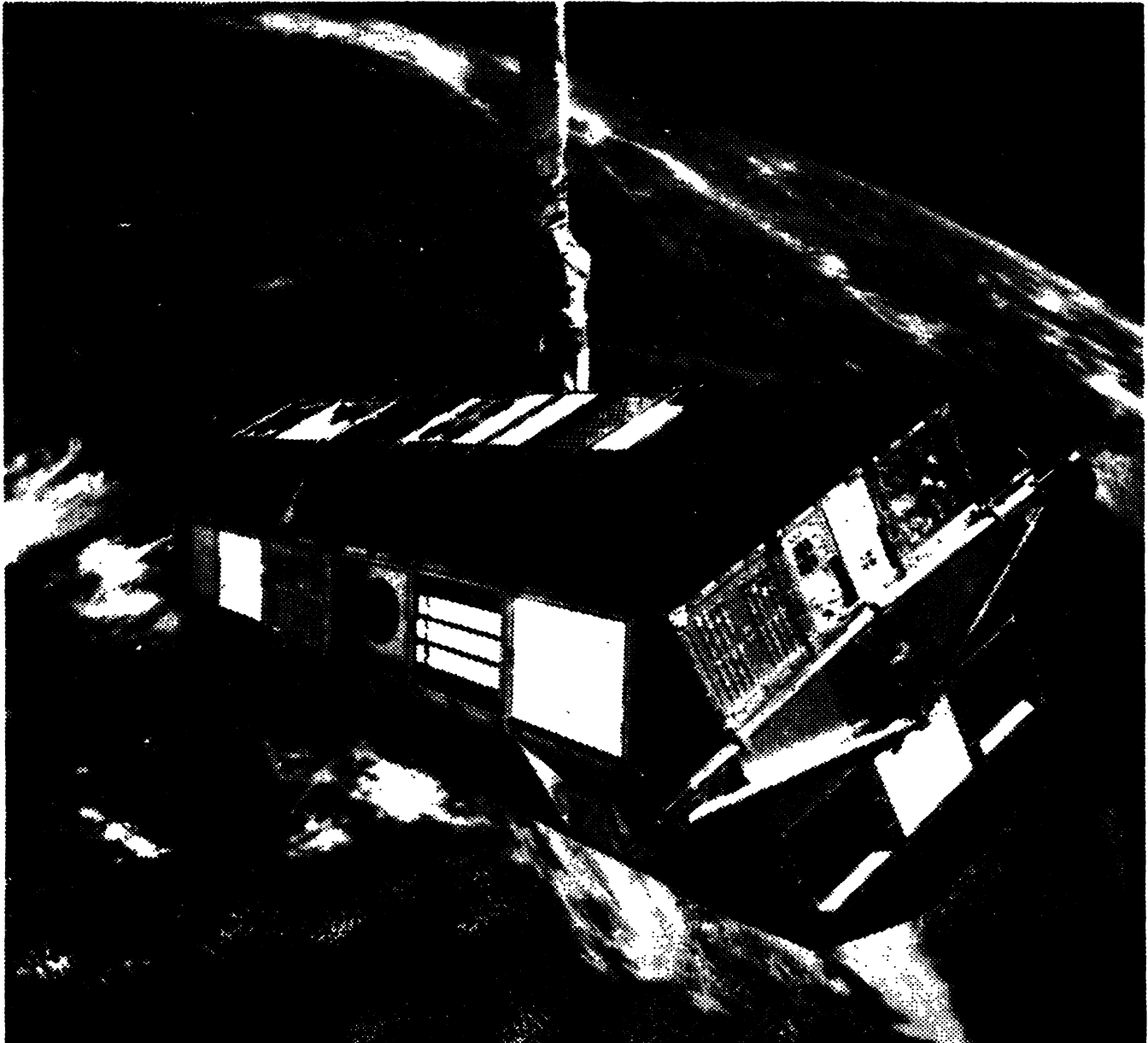
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